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IN deciding that the question of draftsmen working out of hours for others than their employers was not within the province of an architectural association to regulate, or at least should be left to the Committee on Professional Ethics of the Western Association, the Illinois State Association has done wisely. The discussion has brought this point of ethics before both architects and draftsmen, and all can be accomplished by private contract that the resolution was intended to cover.

ON another page will be found a report of the recent meeting at Washington of the joint committee of the Western Association and the American Institute upon the reorganization of the office of Supervising Architect, from the pen of Dankmar Adler, a member of that committee. It will serve to show how impossible it is for one supervising architect to creditably perform his duties, owing to the immense amount of labor devolving upon his office, and how necessary is the reform proposed by the architectural profession.

IN a letter received from James F. Gookins, secretary of the State Soldiers' and Sailors' Monument Commission of Indiana, which we publish in another column, our attention is called to a slight misstatement made in our account of the monument competition, recently closed. We find that the mistake came about, first, through our using the word "circular," when we meant "advertisement"; and, second, through a misapprehension in regard to the first advertisement issued by the commission. We remembered our conversation with Mr. Langsdale, chairman of the commission (see number for July, 1887), and, without investigating, was under the impression that the advertisement was written upon the same basis. We now find that it was not, but broadly outlined the course afterward so successfully pursued. The greatest praise is due to Mr. Langsdale as well as his co-laborers, and it is just that he and his commission should receive full credit for so earnestly and intelligently laboring for the best interests of his state, and in a direction that will have a strong influence upon like competitions in the future. We commend the letter of Mr. Gookins to the attention of architects, because of its bearing upon the present state and future conditions of public competitions in this country.

WE expect that the pulpit will continually remind us that living is something more than bread and butter getting and eating; and that the real becomes the more truly real by being indissolubly linked to the ideal. Therefore we are not surprised when Mr. Swing, in a recent sermon, speaks of the duty of making life beautiful, and tells us that truth plus poetry, is infinitely more telling in laying hold of men's hearts and stirring them to action, and that we should seek to see the poetry in life, and to express beauty in all our works of utility to the end that they may thereby be more effectually useful. In truth, so accustomed are we to hearing something akin to this from the pulpit that we are apt to overlook its importance, and to say that that sort of theory is very well for men who live in studies and read and make books, but that it is quite foreign to the business of erecting substantial warehouses, or selling potatoes, or running railroads, or performing any of the ordinary functions of modern industrial life. It is a pleasure, then, when a gentleman, who is at the head of a bank and president of the Chicago Board of Trade, and presumably driven by practical affairs, not only finds time and inclination to think about it, but even prepares an address, in which he sets forth the value of art in

modern life, and urges that all classes enter upon the study of art to the end that they may find in beauty a pleasure which successful business life cannot bring, and which shall serve as a permanent good when money and the like vanish. We are not sure that art, poetry, and love for beauty will do all for which Mr. Swing and Mr. Hutchinson hope. Mr. Matthew Arnold's unavailing prayer for peace may serve to indicate a one thing yet needful; but we are very sure that much can be done to make American cities and homes attractive, and American life less barren and hard, by such an art education as Mr. Hutchinson advocates. It can do what money and business success cannot do, and can be measurably independent of money; and the recognition of this fact from such a source may well be considered a sign of the times.

ON Sunday evening, April 8, at Chicago, occurred the first of a series of conferences between representative working men and prominent business men for the purpose of a friendly interchange of opinions, and of arriving, if possible, at a common understanding of conditions, needs and projected remedies that may aid in reaching an amicable solution of the problems that grow out of the relations between labor and capital. The general programme is to have at each meeting a talk or address on some subject of joint interest, followed by questions on the topic in hand, put by anyone in the audience and answered by the speaker; no random discussion being permitted. The first conference was held in a room accommodating about four hundred persons, and this being found inadequate, the subsequent meetings have been held in the Madison Street Theater, which has been filled to its utmost capacity. The audiences are composed of persons coming from all social classes, and following all manner of occupations. It is questionable what immediate result will be reached in the settlement of the questions at issue, or how largely either side will carry conviction into the minds of those already committed in another direction. But scarcely anything is of more importance at the present time than that there should be a mutual good feeling between employers and employés, a willingness to acknowledge that there are two sides to almost every specific question, a readiness to admit the honesty of the other side and to give all claims a respectful hearing. Whatever else may eventuate, it is hoped that these friendly talks may have the result of establishing mutual respect and good will from this informal personal contact.

THE first of the series of economic conferences was addressed by George Schilling, a cooper by occupation, on the subject of "The History, Past Achievements, and Present Plans of the Knights of Labor." Mr. Schilling is an individualist of the Herbert Spencer type, and carries the doctrine of *laissez faire* to the furthest extreme; finding the remedy for the present economic inequality in organizations of the laborers so strong that their just demands cannot be safely refused. The third meeting was addressed by Thomas Morgan, a blacksmith; subject, "The Remedies of the Socialist." Mr. Morgan presented facts and statistics to show the existence of extreme, unmerited poverty; he asserted that the competitive system had broken down, and cited the modern trust and pool in proof. The remedy is to be found in the gradual absorption by the state of all industrial and commercial functions that have fallen, or shall fall, into the hands of monopolies. These functions were thereafter to be performed by the state, through its civil servants, at cost of performance; and in due time the state would become a huge industrial co-partnership. Details were meager, and it was assumed that the civil service would be a business-like service. The second meeting was addressed by Lyman J. Gage, president of the First National Bank; subject, "Banking and the Social System." Mr. Gage explained the operations of banks, what their economic functions are, and how they facilitate exchanges. He occupied a position midway between the extreme individualist and the extreme socialist, and maintained that the function of government was to regulate when necessary, but not to undertake the operation of industrial enterprise. At the fourth meeting Mr. Charles L. Hutchinson, president of the Board of Trade, explained the operations of the Board of Trade and its functions in furnishing the farmer a ready market, in checking illegitimate speculation, in disseminating information to producers and consumers, and in handling large quantities of product expeditiously and with advantage to both producer and consumer. He asserted that under the rules dealing was limited to something which either was actually in existence, or was actually to be in existence in due time, and that the rules of the board forbade gambling. Many of Mr. Hutchinson's hearers, ourselves among the number, were somewhat skeptical as to the rigid enforcement of this rule. Unquestionably, Mr. Hutchinson is correct in asserting that very few operators on the Board of Trade make more than a modest living.

ONE fact elicited by the economic conferences is the great divergence of opinion in the ranks of the Knights of Labor on the question of the functions of government in industrial society. In the organization are men of every conceivable shade of opinion on this point, from the extreme individualist with his "necessary evil" theory of governments, to the out and out communist with his all in all theory of the state. The majority of the Knights are socialists, and advocate a considerable extension of governmental activity in industrial and commercial enterprises. But the opposing factions are in perpetual ferment, and the interaction of the opposing opinions is certain to serve as a check upon extreme or revolutionary actions on the part of the organization. The least encouraging thing about the conferences is that the longest continued and most vociferous applause is awarded to those words of the speakers which least deserve any respect or consideration from intelligent hearers. A grossly extravagant statement, an assertion with hardly enough of truth to keep it afloat an instant, an utter misconception of the utility of or of the benefit conferred by a particular institution, a fling at the pulpit—this is the sort of thing that brings down the house, and causes the intelligent listener to give increased heed to Mr. Powderly's plea for education, mental and moral, as an indispensable prerequisite to a solution of the industrial or any other social problem. If these conferences shall in the least degree further this education, they will have served no small purpose.

THE Vienna *Building Trades Journal* has recently published two double page illustrations of American frame houses, mostly of the cheaper class, however, and adds some notes, from which we quote as follows:

> With the exception, perhaps, of the English, no other people in the world understand so well how to find health and comfort in frame dwellings as the Americans. This is due in part to the Anglo-Saxon habit of separate living, one family to a house, and partly to the comparatively high average of prosperity among all classes of people. There every person who can afford it either owns his separate house or cottage, or rents one, and lives, if possible, in the suburbs, wholly removed from the scene of his daily toil, to and from which he journeys daily, often consuming an hour or more in the trip each way. It may safely be assumed that 95 per cent of the dwellings in the United States are detached.

Here follows a notice of the ready-made house manufacture in this country, as to which we cannot share the complacency of our foreign contemporary's estimate, its effect being violently destructive both to art and originality. It is gratifying to find our German friends so appreciative of American achievements, and we are glad to note that the

illustrations on one of the double pages are fairly creditable specimens of the better class of American frame houses of five or six years ago. But most of the twenty-eight cuts on the other double page, which our generous neighbor devotes to us, are too strongly suggestive of the catalogue of the ready-made portable house manufacturing industry to receive our indorsement as illustrating anything above the very commonplace. In our monthly photogravure edition will be found a much better representation of the actual wood architecture of our day, as also of our more noteworthy brick and stone structures.

Photography in Architecture.

PART VII.—BY FRED D. FOSS.

THE developing qualities of a recently discovered chemical, known as hydrochinone, has lately been attracting the notice and experiments of numerous workers in the art. Their experiments have given such good results, and the developed negatives have shown such excellent color and printing qualities as to lead one to suppose that the acme of developing agents had been at last discovered. Hearing so many reports of the good qualities of hydrochinone lead the author to make a few experiments with this chemical, modifying and enlarging upon the formulas of those who had given their experiences and methods of compounding this developing agent through the various trade journals. After some trouble in finding the article (it can now be had at the stock house of Messrs. G. A. Douglass & Co., Nos. 185 and 187 Wabash avenue), I made up two solutions and went to work with a feeling that failure would result, but I must confess that surprise succeeded the anticipated failure. Hydrochinone is an article that seems to be little known at present, but the opinion among those who have used it is that when it has been tried by more of the professionals and amateurs it will be better understood and brought more prominently into use. The name hydrochinone is found spelled in several different ways, namely: hydrochinone, hydrokinon, hydrokinone and hydroquinone. As to which one is correct the reader is at liberty to say. It is spelled hydrochinone in this article, as that is the way it was found on the label of the bottle that came from Germany, and it makes little difference which way it is spelled so long as the article procured does the work. The first formula tried was that of a German chemist and photographer, Dr. Eder, and is as follows:

No. 1.

Carbonate of soda	50 grains.
Water	1 ounce.

No. 2.

Hydrochinone	12 grains.
Sulphite of soda (crystals)	60 "
Water	1 ounce.

DEVELOPER.

No. 1	1 ounce.
No. 2	1 "
Water	1 "

A plate was exposed upon a landscape in bright sunlight about two seconds, using the smallest stop in the lens—about the right time—and developed with the above quantity of mixed developer. No sign of an image made its appearance for five minutes, and several uncomplimentary thoughts regarding hydrochinone suggested themselves; but at the end of seven minutes a faint sign of the sky was visible, and from this time forth the plate developed quite rapidly, not so rapidly, however, as it would have done had the pyro-soda been used, and at the end of fourteen minutes the development was stopped; the plate thoroughly washed, and placed in the fixing bath. The result was a very intense negative, but one full of detail and of a beautiful gray-black color. The next plate was exposed—upon the same subject with the same stop in the lens—seven seconds and developed with:

No. 1	6 drams.
No. 2	6 "
Water	2 ounces.

The result being a finely developed negative full of detail even in the darkest shadows, and of a color resembling an iron developed wet plate, and its printing qualities were excellent. Several other experiments were made, the results of which and the proportion of developer used will be given in the next article. In the last article the number of minims given in the fluid table should have read:

60 minims	1 fluid dram	60 minims.
8 drams	1 ounce	480 "
16 ounces	1 pint	7,680 "
8 pints	1 gallon	61,440 "

(*To be continued.*)

*Continued from Vol. XI, No. 4, page 43.

Style.*

BY LOUIS H. SULLIVAN, ARCHITECT.

IT would appear to be a law of artistic growth, that the mind, in its effort toward expression, concentrates first upon matters of technical detail, next upon certain abstractions or theories—for the greater part mechanical, and quite plausible as far as they go—and at last upon a gradual relinquishment of these, involving a slow and beautiful blending of all the faculties with the more subtile manifestations of emotion. In other words, such growth evidences at the beginning of its rythm the objective, and toward maturity, the subjective view.

This order of development, all things considered, is probably the one the most nearly consistent with the tendency of normal faculties. By normal faculties I mean those of average strength and keenness, free from any serious hereditary warp, or morbid bias, and subjected to the ordinary conditions of education.

I shall not in this connection directly consider the law of growth as manifested in the works of the few great masters, and which differs profoundly from the above; for their art in all its potentiality is born with them, and prophesies in earliest childhood the destiny of its great consummation.

But rather, I shall proceed from this basis: that the larger number of the art works of all ages are products of a cultivated mediocrity—mediocrity of the sort that therein technical dexterity aspires to compensate us in a measure for the absence of a motive impulse; cleverness and an oblique mentality usurp the place of an absent psychic life; wherein words are accepted in the stead of things, and things in the stead of meanings—in brief, that phase of culture which may be called the comedy of art.

To the master mind indeed, imbued with the elemental significance of nature's moods, humbled before the future and the past, keenly aware of the present, art and its outworkings are largely tragic.

Between these extremes there lies a quasi-transitional zone, wherein the concomitant elements that constitute the artistic nature are so varied in their relative energy and fruitfulness, wherein the growth of the faculties proceeds, not as a slow consistent and definite expansion of a pronounced individuality, but rather by a succession and gathering together of substitutious amendments and accidentals, that, to the earnest student uncertain as yet of his status, and unwilling to make the larger sacrifices, there lies within this field the greatest harvest of attainment that can come to his hand.

And such considerations shape this fundamental difference between the great and the little master—that the latter acquires by means of painstaking and industrious re-hypothecation, while the former is driven on to his destination by forces superior to his yea or nay.

While it is true that the little master can never become the great one, yet is his domain large, and it includes all that ingenuity, talent, fine sensibilities and a considerable genius can accomplish.

To the domain of the little master let us therefore direct our attention. As to the great master, no hand may lighten his burden, no power shall make for him the crooked straight, and the rough places plane.

That which we call style, or rather, the word style itself, is as dubious in meaning as is any word in common use. The fact that a word is, and has been for generations, in common use, signifies that it has gathered to itself the multiple experiences of the race, and has become thereby thoroughly vitalized. Now note that the greater number of such experiences are largely independent of words, and the more subtile ones almost absolutely so, and this will suffice to indicate how true it is that one's capacity to interpret the meaning of a word, to perceive its obscure but real significance, is dependent upon the richness of his life experience within the domain of feeling that the word has come to symbolize.

If this is true of a word, how peculiarly true is it of a work of art. How much more essential is it, in turning from the word, style, to contemplate the thing, style, that our experiences be real, our judgment sober, our sympathy humane. And, most of all, how urgent is it, when we seek the meaning, style, in art, in nature, and in the soul, that every faculty be keyed to most delicate and exquisite tension, and our concentration be absolute as in a dream.

Style, in its essence, and amid all its spontaneous manifestations, is as unsearchable as is any other attribute of life. Analysis, however keen, can at best but discourse of its grosser material envelopings, or formulate abstractions concerning its rythms. Where reasoning fails, however, intuition goes blithely on, and finds the living quality in things common and near to the hand.

Have you thought much on common and simple things? Has it occurred to you how complex, how beautiful and mysterious they really are? Take, as an instance, a cow eating the grass of the field. Where other than in these natural doings may you behold perfectly spontaneous and unequivocal adjustment of means to end? At first glance how commonplace: to the thoughtful view how impressive and awakening an exampler of unattainable style! Who shall portray that simple scene and infuse his work with the poetry which the soul sweetly and perfectly attuned to nature's life perceives therein? Who shall apprehend the soul of the cow and of the grass, who shall, with *naïve* sincerity, express the explicit circumstance that the cow eats the grass?

We are prone to heed too little those things that are near us; we strain our eyes with looking afar off; we are meanwhile unaware that the grass, the rocks, the trees and running waters—that nature's palpitating self, indeed, is at our very feet. Through vanity of intellect we ignore that which is common; and by the same token we are lost to the sense that a poetic infinity resides in these, the commonest of things. No pathos can exceed their pathos, no inspiration can surpass their inspiration; there is not tenderness, not power, not alluring and impelling greatness which is not in them.

Therefore, I counsel you, if you would seek to acquire a style that shall be individual to you, banish from your thought the word style; note

* Paper read before the Chicago Architectural Sketch Club, April 9, 1888. Revised by the author for THE INLAND ARCHITECT.

closely and keenly the thing style, wherever found; and open your hearts to the essence style at all times and in all places. This is the germ.

The formative process is tedious and burdensome, clear and obscure, joyful and desponding, discouraging and bewildering to the last degree.

To be patient, observing, reflective, industrious and sincere; to possess that fortitude which constrains one to perseverance in spite of adversity, wounded pride, revulsion and disgust, and the secret consciousness that each successive endeavor is but a little less fatuous than its predecessor; to carefully train and nurture the eye, the ear, the hand, the heart, the soul; to work and watch and wait for a long time; these are part of the price which one must pay for a sound style, and the price mounts ever with the aspiration.

Thus do the faculties unfold with time, and the most precious one, that of self-criticism, comes in due season. Lastly comes the saddest of all—the power clearly to discern one's own limitations; for this inevitable warning surely indicates the end of growth, and fixes the permanent status.

The word soul is a symbol or arbitrary sign which stands for the inscrutable impelling force that determinates an organism and its life; it is that mysterious essence which we call our identity; it is that in us which is the most simple though seemingly the most complex; it is that which is born with us and which can undergo no fundamental change. Disregarding the perplexities and dogmas which, by natural inference, may be associated with this symbol, we must not fail or fear, in our search for an intimate understanding of the essence of style, to note that this elemental and abiding quality of identity or soul is inherent in all things whatsoever. Thus: we see the pine-tree—we notice its general shape, we examine its tapering trunk, its mode of branching, its hold upon the soil or the rocks, its branches, branchlets, bark, leaves, flowers, cones, seeds, inner bark, fiber of wood, sap; we reflect that these have all of them something quite in common, and this something impresses us as quality segregating this tree from other trees and other things. To communicate the sum and resultant of these impressions in speech we invent or make use of the word pine, which word expresses a tacit recognition of the peculiar nature or identity of this kind of tree, and, in a general way, as single words go, sums up its style. Pushing our investigation further, we discern that there are several kinds of pine-trees, each with a peculiar and well-defined nature; and it is this collateral definition which establishes for us a clearer perception of the identity of each. Ever unsatisfied, we become aware that one pine-tree is not precisely like another of the same kind; we conceive that it possesses a subtile and permanent charm of personality. Our sentiment is touched; we are drawing near to nature's heart. We love this tree. We watch by it through all its experiences. We are with it by night and by day. We see it respond to the warm caresses of the spring-time sun, and observe with a thrill how it sparkles and drips amid the glories of an April shower. It sways so gently in the passing breeze; it tosses and protests in the grasp of the furious storm. Among its brethren, in the summer forest, it stands so calm, so content; it freely gives its odor to the still air. Within the solitude of winter's sleep it also sleeps, and we too sleep its sleep in sympathy; erect and somber it stands, so motionless under its mantle of snow, so unspeakably calm, so content, so wild. Some day the storm snaps its life. The end is come. Slowly and surely time works decay, and that which was a pine-tree, though vanished, has left its individual trace upon us, never to depart. Through all these changes it was a pine-tree, ever a pine-tree; they but evidenced its inner nature. Such was its identity, such was its little history, of such was its exquisite style.

This is true of a pine-tree. Is it not also essentially true of an oak-tree, of a willow, of a rainstorm, of a river, of a man?

If it is true, as it would appear, that the style of a pine-tree, or any other tree, is the resultant of its identity and its surroundings, is it not equally and especially true that the style of an artist is in its essence and form the resultant of his identity and his experiences?

The style is ever thus the response of the organism to the surroundings. How simple are the surroundings and experiences of a tree. How multiple are the surroundings of a man. When his eyes are opened to them, how complex become his experiences.

How does the man respond to the gentle procreant influence of spring-time? As the pine-tree, as the oak, as the lark? Whichever it be, of such is his style. Is he stirred by the gentle and impalpable breezes that come from nowhere and are gone? Surely the pine-tree greets with delicate tremor every slightest impulse of the air. How much more is the man than a tree? how much less?

In reality the first essential condition toward a style is to be born with a subtile identity, the rest goes of itself; for one should bear in mind, and take much comfort in the fact, that there exists, in addition to himself, a very considerable universe.

It is the function of intuition, the eye of identity, the soul, to discern the identity of truth inherent in all things. It is the function of sympathy, the soul of love, to cause one's own identity to blend for the time being with the identity or inner nature of other things. It would be well, therefore, if there were choice in these matters, to be born possessed of the germs of intuition and sympathy; many are.

Many have within them somewhat of the native simplicity of the forest tree. There are not very many, and their portion is not always very great. Yet to him who has this simplicity of soul I say take hope, for to him shall be given. From him who has not this tiny impulse of faith in himself and of confidence in nature, I say from such an one shall be taken even that which he has; for all else that he may acquire is as vanity. Herein lies the difference between the real and the spurious artist; and of such is the obscure origin of art and of style.

In examining a work, for purposes of analysis and criticism, bear ever mind that no amount of dexterity, of learning, of sophistication, of trickery, can successfully conceal the absence, in its author, of sincerity. Learn, also, not only to look at a work, but into it; especially learn not only to look at nature but into it; emphatically strive to look into men. When you have learned to do these things you will live; for it is then that you will see in an art work the identity and spiritual nature of the man who produced it. He cannot escape; nor can you in turn escape. Think not that you may for long conceal your littleness or your largeness behind ink and paper, behind pigments, behind brick and mortar, behind marble, behind anything; for to the relentless eye, searching out identities, the work melts away and the man stands forth; and so it should be.

Did you ever stop to consider that when one produces a work he plainly stamps upon it the legend: This is the work of a fool—of a trickster—of a cynic—of a vacillating and unstable spirit—of a vain and frivolous presumption—of a good heart and weak head—of a conscientious and upright man—of one who loves his fellow men—of a tender and exquisite spirit—of a large and serious nature—of a poet born—of a soul that walks with God?

For if a tree speaks to the attentive ear, if a storm speaks, if the waters speak, so then do all things, animate and inanimate, speak, and their speech is the universal language of the soul.

Take heed, then, lest you trifle, for at best we may but trifle; and thus, if you would really seek a style, search for it not altogether in books, not altogether in history, but search for it rather in the explicit reality of your own inner life and your own outward surroundings.

The Training of an Architect.*

BY C. FRANCIS OSBORNE, OF CORNELL UNIVERSITY.

IT is with great pleasure, Mr. President and gentlemen of the association, that I have come here today in response to your secretary's kind invitation, not only because I desired to make some personal acknowledgment of the honor conferred on me by my election as a member of your society, but also for the reason that I am able to convey to you the assurance of the hearty sympathy, both of Professor Babcock and myself, with this movement in which you are now engaged, and to express the hope that you will allow us to consider ourselves as being very active honorary members indeed.

I learn from your constitution that two of the principal objects of your association are: first, the promotion of the artistic, scientific and practical efficiency of the profession; and, secondly, the cultivation and encouragement of the study of the kindred arts.

Now, if I had been asked to describe as briefly as possible the aim and scope of our work at Cornell University, I do not know that I could have found any words which would have so exactly expressed the principles upon which our course of study is based, and the direction in which all our efforts of instruction have tended.

Working, then, upon parallel lines, if in somewhat different fields, it seems especially fitting that I should be able to express to you our entire sympathy with your efforts to advance the standard of our profession to a point commensurate with its responsibilities, and to offer to you, as a return in some measure for your kindness in giving us the opportunity to identify ourselves with you in this movement, the hearty, and I believe effective, coöperation of the university which I have the honor to represent. I am, indeed, authorized by President Adams, to say here today, in his behalf, that Cornell University will be always ready, through its departure of architecture, to work with you in any way on the lines laid down by your Constitution; and to further express the hope that you will consider the resources of the university, its libraries and museums, at your entire disposal for all purposes of consultation and reference, both individually and officially, in connection with the work of the association.

I have been asked to speak here today upon the subject of architectural education, to give some expression to the conclusions we have come to in the course of our work at the university, regarding the system of training most likely to produce a well educated and efficient architect. I will endeavor to do so, first stopping to make some necessary preliminary inquiries regarding the architect himself and his profession as it is today. Let us take the latter question first.

You must, I think, be aware that there are forces at work within the pale of our profession—which we are all of us compelled in some measure to recognize—which are tending to elevate the standards by which our professional capacity and work are measured, to a position commensurate with the increased responsibilities laid upon us by a more widely diffused knowledge of art, and a better feeling for good work on the part of our clients. I say that you must all be aware of the fact, for take your association to be nothing less than a visible evidence that you have all felt this impulse and are endeavoring to make a fitting response; and these forces to which I have alluded are so beyond measure irresistible that those of us who do not respond, or who prove laggards in the race, must inevitably fall out of harmony with the spirit of all that is best and most strong in the work of this generation of architects and its successors.

There seems to me to be two notable facts connected with this reformation: one is the rapid progress it has made since it first began to make itself actively felt. We need not go further back than fifteen years to make an effective comparison, and we shall not be far wrong in placing its most important point of departure in the year 1876, or in assigning as its immediate cause the international exhibition of that year. The hidden expansion of their artistic horizon on the part, not only of many members of our own profession, but of the general public as well, and the desire to examine for themselves the art treasures of the Old World, of which that exhibition gave but a faint reflection, was coincident with a recognition of the fact that our professional state was, from an artistic point of view, by no means equal to our foreign brethren, and an earnest determination to apply our new knowledge to the setting right of these matters by virtue of which resolution we are met here today.

The other notable fact to which I have alluded is this: That unlike most other professional reformations, this one in which we are immediately interested, has been brought about quite as much by the efforts of the older as of the younger members of the profession. I do not know of any way in which this fact can be made more clearly evident, than by an examination of the columns of the *American Architect* from its first number of January

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8, 1876, to the present day. Indeed, in that first number you will find what is, doubtless, the earliest published appeal to the profession at large to unite our purposes of self-help and improvement, and in defense of professional rights and privileges. But it is to the published designs contained in these volumes that I would more particularly direct your attention; and a comparison of the earlier with later work of the older members of the profession will show that they too have a ready response to the new demand, and so different in most cases is the earlier from the later work, that we should feel quite justified in naming them as the real leaders, did we not know how large a part is the result of the younger generation. We are spared, then, the spectacle of a profession divided against itself, of an earnest and spirited effort, on the part of the younger men, for the reform of abuses and the advancement of professional standards, met by the apathy, or active opposition of the older and less easily moved. There is no division of our ranks into radicals and conservatives, one and all, happily, of one mind and heart; fully agreed, I think, as to the best interests of our profession, and the result of such united effort cannot be for a moment doubtful.

And now for the second question: What is the architect? I think you will agree with me when I affirm that the function and duties of an architect are of a three-fold nature. He is, primarily and essentially, an artist. This is his distinguishing characteristic as contrasted with the mere builder or engineer. But his artistic skill must find expression through the medium of special materials, the nature of which again distinguishes him from his brother artists, the sculptor, the painter or the art critic. Bearing, then, these two facts in mind, the architect, primarily an artist, incidentally a constructor, let me ask your attention to a definition which, to me, is entirely satisfactory in this connection.

I would define the architect as a modeler in building materials. Let me illustrate my meaning by a definite example: An architect is called upon to design a building for a particular site under well-defined conditions. Let it be a country house, a seaside cottage, a great civic building, or what you will, the procedure of the architectural artist is the same in all cases.

Having first determined, from a careful study of the site and conditions, and guided by his artistic instincts, just what particular expression or effect his building should have, in order that it may fall into harmony with its setting, so subtle and yet so complete as to thoroughly satisfy all beholders that it is precisely the right building for the place, he will next proceed to express that vision as closely as may be, by so building up his mass and modeling and grouping its separate parts out of the materials under his hand, his stones, his bricks, his timbers, his metals, that the resulting expression shall result from a legitimate and characteristic of each separate kind of material which goes to make up the whole, which power of confidently giving material expression to his thoughts can only come from a preliminary mastery of the materials themselves.

Resting content for the moment with this explanation of my definition, I will pass on to a brief reference to the third quality which goes to make up the successful architect, that is, good business ability. Although it is true that his reputation among posterity will rest solely upon his power as an artist, the architect's financial success, in his own day and generation, will depend very largely upon his capacity for the successful transaction of such business affairs as the practical nature of his art renders necessary between his clients and himself, or on their behalf, with contractors and others.

It is important that the architect should endeavor to cultivate, as much as possible, by an extended office experience, any talent in this direction which he may possess; and although it is not uncommon to find a successful firm in which the artistic and business duties are carefully divided between the partners, his own best interests will be served if the architect can transact his own business for himself.

Having ascertained, then, the existence of three important facts as bearing upon the subject in hand, namely:

1. An intelligent public becoming daily better instructed on the whole as to sound canons of art, and fully *au courant* with the best work of the best designers in Europe, and demanding as good work or better, if it may be, from us.

2. A united profession, alert as to its best interests, and well determined that these interests be in a closer professional union and a higher standard of professional knowledge and skill; and

3. The architect himself, essentially an artist, incidentally a constructor, and preferably a man of affairs, we are in a position to justify ourselves in attempting to formulate a scheme of professional training, which shall fit the man for the place and its duties.

I can best illustrate the course of training I have in mind by supposing it to be applied to the case of an actual student, who presents himself at the age of 16 or 17, ready to be made an architect of (if it lies in him at all), as soon as may be.

Regarding him, I take two things for granted:

1. That he shall have a good English education, be able to read and write his mother tongue with intelligence and precision; have a good knowledge of geographical science, both physical and political, and shall have been so far instructed in the science of mathematics as to have mastered the ordinary processes of arithmetic and the elementary ones of algebra and geometry. Added to this, it is highly desirable that he should have had some instruction in the political history of the world, and, at least, an elementary acquaintance with those sciences which used to be included under the term, natural philosophy. I should prefer, indeed, if it were possible in this hurrying age, that he should wait a year or two longer and not present himself until he is at least 18, he would be then comparatively more mature; would have been able to carry on somewhat further the studies I have indicated; and might have acquired, in addition, the ability to read at least one modern language. At this age, too, he would be somewhat more sure in his choice of a profession, and better able to profit by the studies he is about to undertake. We will accept him, however, at the age we are most likely to get him, and will put him forward on his way as fast as his industry and abilities shall warrant.

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The second fact, however, that I take for granted is so essential to his success that the absence of it would render all that has been otherwise presupposed of no account; and would warrant us in rejecting the candidate without further examination.

That is the possession of some artistic feeling and impulses, however slight they may be. Just how they ought, or are most likely to manifest themselves, it is not easy to say; as they will appear differently in different persons, but their presence or absence may be easily detected by the student himself, or by those most nearly interested in him. If present they may be developed; but if absent, they can never be imparted by any process of instruction whatever.

Assuming our candidate, however, to be well qualified to the extent I have suggested, let us take him in hand without further delay.

Lest I should seem to go somewhat unduly into detail regarding the preparation and course of studies of the candidate for architectural honors, let me say that it is because the adverse criticisms to which such a course has been subjected, by those who have made no personal examination of its results, have invariably arisen from an ignorance of the real nature of the work. I have desired, therefore, to avail myself of this opportunity of making a clear explanation of our own methods so far as that is possible within the limits of a single paper.

The twofold nature of our profession suggests a division of the preparatory studies into those relating to construction and those relating to design so far as they can be separated at all. The foundation of the science of construction is mathematics. Just how far our studies in this direction should be carried will depend upon what kind of constructions are to be undertaken.

To the civil engineer having the direction of railways, bridges of enormous span and other similar structures, it is evident a very exhaustive study of the principles of applied mathematics is, to say the least, highly advisable. But for the architect who is only incidentally a constructor, whose use of materials cannot be controlled by motives of strict economy, and the strains in whose buildings are very far from being of the violent or exceptional nature with which the engineer has constantly to contend, I am quite certain that all necessary mathematical knowledge will have been gained if the student has mastered the principles of algebra, geometry and trigonometry, those will be all-sufficient for him in his subsequent work which relates to the mechanics of building and stereotomy.

In order that we may have some sound knowledge of the nature and characteristics of the various building stones, the clays and their products, and the various cements, their geographical distribution and their adaptability to the various processes of building, it is highly desirable that the student should be instructed in the principles of economic geology. To this end he must have had some preliminary instruction in chemistry. All this is so easily acquired, as is shown in our experience at Cornell University, that it seems a pity the student should lose the opportunity of acquiring information which would enable him to decide upon the value of this or that building stone, or of appreciating the meaning of such an advertisement as is now appearing in our professional journals in which the attention of architects is called to the fact that a certain very beautiful building stone is a hydro-silicate of magnesia and the truth of which assertion the student would be able to ascertain for himself from his previous work in determinative mineralogy. He would gain a similar knowledge of the various kinds of timber used in building by a similar course of instruction in economic botany; a study in this connection, too, of the structures of plant forms will be of great assistance to the student in his subsequent work in design.

To anticipate a little, I may say here that the student would have access to a large and carefully arranged collection of building materials, and especialiy of the various stones and woods so finished as to show their possible values as elements of expression in design.

The study of materials would also include a sufficient consideration of the various metals, paints and minor materials which go to make up the finished structure.

In construction I would begin with a study of the simpler forms, such as brickwork and masonry, arches, piers and so forth; passing later to a consideration of more complicated structures, the student drawing out for himself typical examples of each to scale.

I would next turn his attention to the preparations of working drawings. This I think is best done by having him first trace a carefully prepared and fully figured set of scale drawings for a small house, which have been first fully explained to him, and which are complete from the plan of the site to the final specification, the adaptation of each part to the particular circumstances having been especially emphasized by the instructor.

This principle of the intimate adaptation of a design to its environment should be strongly impressed upon the student from the very start, in order that he may carefully avoid that false way of thinking which imagines that a design is a design, good alike in all places, and under all circumstances. I would also have him very thoroughly instructed in all the processes of descriptive geometry and stereotomy, not only because they will be indispensable to him in the preparation of his more advanced working drawings, but also because drill of this kind is of invaluable aid in strengthening the powers of architectural composition, enabling the designer to see his forms in space before putting them on paper, and often suggesting to him special combinations which would not otherwise have occurred to him. Finally, I would instruct him very carefully in the laws of the mechanics of building construction; giving him a good working knowledge of the methods of determining strains as they occur most usually in practice, as the best way of providing for them so as to enable him to meet any problem likely to arise in the ordinary course of practice.

Special problems, involving unusual difficulties, such as roofs very wide span, as railway stations, or foundations in especially treacherous soils, and the like, requiring special experience for their solution might properly be referred to a consulting engineer, as is, in fact, the usual practice. Instructions in the principles and practice of heating, drainage, ventilating and the like, would be given in courses of lectures, carefully illustrated by

closely and keenly the thing style, wherever found; and open your hearts to the essence style at all times and in all places. This is the germ.

The formative process is tedious and burdensome, clear and obscure, joyful and desponding, discouraging and bewildering to the last degree.

To be patient, observing, reflective, industrious and sincere; to possess that fortitude which constrains one to perseverance in spite of adversity, wounded pride, revulsion and disgust, and the secret consciousness that each successive endeavor is but a little less fatuous than its predecessor; to carefully train and nurture the eye, the ear, the hand, the heart, the soul; to work and watch and wait for a long time; these are part of the price which one must pay for a sound style, and the price mounts ever with the aspiration.

Thus do the faculties unfold with time, and the most precious one, that of self-criticism, comes in due season. Lastly comes the saddest of all—the power clearly to discern one's own limitations; for this inevitable warning surely indicates the end of growth, and fixes the permanent status.

The word soul is a symbol or arbitrary sign which stands for the inscrutable impelling force that determinates an organism and its life; it is that mysterious essence which we call our identity; it is that in us which is the most simple though seemingly the most complex; it is that which is born with us and which can undergo no fundamental change. Disregarding the perplexities and dogmas which, by natural inference, may be associated with this symbol, we must not fail or fear, in our search for an intimate understanding of the essence of style, to note that this elemental and abiding quality of identity or soul is inherent in all things whatsoever. Thus: we see the pine-tree—we notice its general shape, we examine its tapering trunk, its mode of branching, its hold upon the soil or the rocks, its branches, branchlets, bark, leaves, flowers, cones, seeds, inner bark, fiber of wood, sap; we reflect that these have all of them something quite in common, and this something impresses us as quality segregating this tree from other trees and other things. To communicate the sum and resultant of these impressions in speech we invent or make use of the word pine, which word expresses a tacit recognition of the peculiar nature or identity of this kind of tree, and, in a general way, as single words go, sums up its style. Pushing our investigation further, we discern that there are several kinds of pine-trees, each with a peculiar and well-defined nature; and it is this collateral definition which establishes for us a clearer perception of the identity of each. Ever unsatisfied, we become aware that one pine-tree is not precisely like another of the same kind; we conceive that it possesses a subtile and permanent charm of personality. Our sentiment is touched; we are drawing near to nature's heart. We love this tree. We watch by it through all its experiences. We are with it by night and by day. We see it respond to the warm caresses of the spring-time sun, and observe with a thrill how it sparkles and drips amid the glories of an April shower. It sways so gently in the passing breeze; it tosses and protests in the grasp of the furious storm. Among its brethren, in the summer forest, it stands so calm, so content; it freely gives its odor to the still air. Within the solitude of winter's sleep it also sleeps, and we too sleep its sleep in sympathy; erect and somber it stands, so motionless under its mantle of snow, so unspeakably calm, so content, so wild. Some day the storm snaps its life. The end is come. Slowly and surely time works decay, and that which was a pine-tree, though vanished, has left its individual trace upon us, never to depart. Through all these changes it was a pine-tree, ever a pine-tree; they but evidenced its inner nature. Such was its identity, such was its little history, of such was its exquisite style.

This is true of a pine-tree. Is it not also essentially true of an oak-tree, of a willow, of a rainstorm, of a river, of a man?

If it is true, as it would appear, that the style of a pine-tree, or any other tree, is the resultant of its identity and its surroundings, is it not equally and especially true that the style of an artist is in its essence and form the resultant of his identity and his experiences?

The style is ever thus the response of the organism to the surroundings. How simple are the surroundings and experiences of a tree. How multiple are the surroundings of a man. When his eyes are opened to them, how complex become his experiences.

How does the man respond to the gentle procreant influence of spring-time? As the pine-tree, as the oak, as the lark? Whichever it be, of such is his style. Is he stirred by the gentle and impalpable breezes that come from nowhere and are gone? Surely the pine-tree greets with delicate tremor every slightest impulse of the air. How much more is the man than a tree? how much less?

In reality the first essential condition toward a style is to be born with a subtile identity, the rest goes of itself; for one should bear in mind, and take much comfort in the fact, that there exists, in addition to himself, a very considerable universe.

It is the function of intuition, the eye of identity, the soul, to discern the identity of truth inherent in all things. It is the function of sympathy, the soul of love, to cause one's own identity to blend for the time being with the identity or inner nature of other things. It would be well, therefore, if there were choice in these matters, to be born possessed of the germs of intuition and sympathy; many are.

Many have within them somewhat of the native simplicity of the forest tree. There are not very many, and their portion is not always very great. Yet to him who has this simplicity of soul I say take hope, for to him shall be given. From him who has not this tiny impulse of faith in himself and of confidence in nature, I say from such an one shall be taken even that which he has; for all else that he may acquire is as vanity. Herein lies the difference between the real and the spurious artist; and of such is the obscure origin of art and of style.

In examining a work, for purposes of analysis and criticism, bear ever mind that no amount of dexterity, of learning, of sophistication, of trickery, can successfully conceal the absence, in its author, of sincerity. Learn, also, not only to look at a work, but into it; especially learn not only to look at nature but into it; emphatically strive to look into men. When you have learned to do these things you will live; for it is then that you will see in an art work the identity and spiritual nature of the man who produced it. He cannot escape; nor can you in turn escape. Think not that you may for long conceal your littleness or your largeness behind ink and paper, behind pigments, behind brick and mortar, behind marble, behind anything; for to the relentless eye, searching out identities, the work melts away and the man stands forth; and so it should be.

Did you ever stop to consider that when one produces a work he plainly stamps upon it the legend: This is the work of a fool—of a trickster—of a cynic—of a vacillating and unstable spirit—of a vain and frivolous presumption—of a good heart and weak head—of a conscientious and upright man—of one who loves his fellow men—of a tender and exquisite spirit—of a large and serious nature—of a poet born—of a soul that walks with God?

For if a tree speaks to the attentive ear, if a storm speaks, if the waters speak, so then do all things, animate and inanimate, speak, and their speech is the universal language of the soul.

Take heed, then, lest you trifle, for at best we may but trifle; and thus, if you would really seek a style, search for it not altogether in books, not altogether in history, but search for it rather in the explicit reality of your own inner life and your own outward surroundings.

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That is the possession of some artistic feeling and impulses, however slight they may be. Just how they ought, or are most likely to manifest themselves, it is not easy to say; as they will appear differently in different persons, but their presence or absence may be easily detected by the student himself, or by those most nearly interested in him. If present they may be developed; but if absent, they can never be imparted by any process of instruction whatever.

Assuming our candidate, however, to be well qualified to the extent I have suggested, let us take him in hand without further delay.

Lest I should seem to go somewhat unduly into detail regarding the preparation and course of studies of the candidate for architectural honors, let me say that it is because the adverse criticisms to which such a course has been subjected, by those who have made no personal examination of its results, have invariably arisen from an ignorance of the real nature of the work. I have desired, therefore, to avail myself of this opportunity of making a clear explanation of our own methods so far as that is possible within the limits of a single paper.

The twofold nature of our profession suggests a division of the preparatory studies into those relating to construction and those relating to design so far as they can be separated at all. The foundation of the science of construction is mathematics. Just how far our studies in this direction should be carried will depend upon what kind of constructions are to be undertaken.

To the civil engineer having the direction of railways, bridges of enormous span and other similar structures, it is evident a very exhaustive study of the principles of applied mathematics is, to say the least, highly advisable. But for the architect who is only incidentally a constructor, whose use of materials cannot be controlled by motives of strict economy, and the strains in whose buildings are very far from being of the violent or exceptional nature with which the engineer has constantly to contend, I am quite certain that all necessary mathematical knowledge will have been gained if the student has mastered the principles of algebra, geometry and trigonometry, those will be all-sufficient for him in his subsequent work which relates to the mechanics of building and stereotomy.

In order that we may have some sound knowledge of the nature and characteristics of the various building stones, the clays and their products, and the various cements, their geographical distribution and their adaptability to the various processes of building, it is highly desirable that the student should be instructed in the principles of economic geology. To this end he must have had some preliminary instruction in chemistry. All this is so easily acquired, as is shown in our experience at Cornell University, that it seems a pity the student should lose the opportunity of acquiring information which would enable him to decide upon the value of this or that building stone, or of appreciating the meaning of such an advertisement as is now appearing in our professional journals in which the attention of architects is called to the fact that a certain very beautiful building stone is a hydro-silicate of magnesia and the truth of which assertion the student would be able to ascertain for himself from his previous work in determinative mineralogy. He would gain a similar knowledge of the various kinds of timber used in building by a similar course of instruction in economic botany; a study in this connection, too, of the structures of plant forms will be of great assistance to the student in his subsequent work in design.

To anticipate a little, I may say here that the student would have access to a large and carefully arranged collection of building materials, and especially of the various stones and woods so finished as to show their possible values as elements of expression in design.

The study of materials would also include a sufficient consideration of the various metals, paints and minor materials which go to make up the finished structure.

In construction I would begin with a study of the simpler forms, such as brickwork and masonry, arches, piers and so forth; passing later to a consideration of more complicated structures, the student drawing out for himself typical examples of each to scale.

I would next turn his attention to the preparations of working drawings. This I think is best done by having him first trace a carefully prepared and fully figured set of scale drawings for a small house, which have been first fully explained to him, and which are complete from the plan of the site to the final specification, the adaptation of each part to the particular circumstances having been especially emphasized by the instructor.

This principle of the intimate adaptation of a design to its environment should be strongly impressed upon the student from the very start, in order that he may carefully avoid that false way of thinking which imagines that a design is a design, good alike in all places, and under all circumstances. I would also have him very thoroughly instructed in all the processes of descriptive geometry and stereotomy, not only because they will be indispensable to him in the preparation of his more advanced working drawings, but also because drill of this kind is of invaluable aid in strengthening the powers of architectural composition, enabling the designer to see his forms in space before putting them on paper, and often suggesting to him special combinations which would not otherwise have occurred to him. Finally, I would instruct him very carefully in the laws of the mechanics of building construction; giving him a good working knowledge of the methods of determining strains as they occur most usually in practice, as the best way of providing for them so as to enable him to meet any problem likely to arise in the ordinary course of practice.

Special problems, involving unusual difficulties, such as roofs very wide span, as railway stations, or foundations in especially treacherous soils, and the like, requiring special experience for their solution might properly be referred to a consulting engineer, as is, in fact, the usual practice. Instructions in the principles and practice of heating, drainage, ventilating and the like, would be given in courses of lectures, carefully illustrated by

all necessary diagrams, and references to authorities as applied in the working out of the students own designs, to which I shall refer later.

This, practically, would complete so much of the course as relates more or less intimately to construction proper, so far as it is possible to make such distinction, and of the four years which is the time required for the full course, about two years would be needed for the preceding studies if they should be taught separately, in a group by themselves. As a matter of fact, however, for convenience, the studies of the two groups are made to overlap to a certain extent, and are carried on together; as it would be highly desirable to repress for two years all reference or work relating to the more essential part of the course.

As any power of composition which the architect may develop would be of little use to him unless he could communicate his ideas to others by adequately expressing them on paper, one of the first things to be learned by the student and practiced with incessant diligence throughout his course, is the art of free-hand drawing, whether with pencil, pen or brush. By the choice of good models, aided by suggestion of his instructor, who should himself have had an architectural training, the student may acquire a large fund of experience in the methods employed by the best designers to obtain desired expressions in their buildings. In connection with this work in its more advanced stages would be instruction in the principles of decoration, as applied especially to interiors.

The next step, I think, might profitably be a study of the historical development of the art of building. This is an essential or at least a very desirable preparation for the study of the art of architectural design as a matter of theoretical development, and is far more to the student than a mere exercise in archiology, for the reason that every national style or individual manner of design has grown out of some preceding style or manner, in accordance with the usual laws of development. It is also incumbent upon the student to be well informed as to what has been done by his predecessors, not only as a matter of general professional information, but more especially that he know just what problems in design have been attempted, and how far the results have been successful. I think that continual reference should be made to the contemporary political history of the people whose buildings are under discussion, in order that the student may have his attention called to the fact that the style is very largely an expression of the civilization amid which it flourished. This is a very interesting point, which I can no more than allude to here. Lantern views are of the greatest importance in the study of this subject as they reproduce, in the most vivid manner, the buildings of which it is of the utmost importance that the student should have a correct idea.

This study of the history of architecture would, of course, be accompanied by constant reference to the library, to the best use of which a good working knowledge of at least one modern language is indispensable, preferably French. By the study of the theoretical development of design, I mean a careful analysis of the various parts which enter into a design as a whole, and a consideration of the various means of expression available to the architect. The expression which results from this or that arrangement of windows, cornices, roofs, towers, and other individual features, is carefully pointed out to the student, and he is given exercises so arranged as to bring out his own power of expression in a similar way. This is a very different thing from copying a stack of motives to be reproduced in a patchwork design; on the contrary, it is a mastery of the principle involved in each method of expression, so that it may be applied originally when that particular kind of expression is again desired in a subsequent design.

To planning, very careful attention should be given as being the foundation or basis of character in design. I have so fully gone into this on another occasion, however, that it is only necessary to refer to it here.

Finally, the student should be carefully exercised in original problems, all the conditions of which are carefully explained to him, in order that he may produce a definite solution. They begin with simple motives, and are continued through two years to more important and complicated cases.

The student's mind is impressed from the first with the idea that a design, to be worthy of criticism, must be the solution of a definite problem, the conditions of which are known. Where possible, actual sites accessible to the student are chosen, in order that he may practice in completely harmonizing in his design with environment. To this end he receives certain instructions in the principles of landscape gardening. He is made to feel that what he is to do, as one phase of his work, at least, is to put such a structure in the landscape as will materially add to its general effect, and be in harmony with it. Their designs are at first very carefully worked out, but as the student masters the mere mechanical process of expression, they approximate more and more closely to sketches, rendered in pencil, ink or color, as the occasion demands. Sometimes they are entire buildings; again, they will be parts of buildings, or even details only. But the range of practice is made as wide as possible.

My paper has grown to such a length that I must be content to merely suggest the next. When the student has finished the preliminary course of training, he may do either of two things: he may go directly into an office for the purpose of learning that business of architecture, which cannot be taught in a school, or he may go abroad to observe and sketch. Both of these must be done, but the exact order of them will depend upon the individual student. At any rate, two or three years in a good office, and six months (if not more) abroad should find the student well equipped for the ordeal of independent practice. He should never forget, however, that he must always be a student, as even then when his work is finished, the amount of professional knowledge he has been able to acquire will be but a very small proportion of all that there is to learn.

In conclusion, permit me to say that this is no visionary scheme I have been describing. I have been assisting in the development of such a course of training for several years, and have seen its workings and I can affirm that it has not been wholly unsuccessful.

HEALY & MILLET, the interior decorators, have just secured the contract for the stained glass in the Trinity M. E. Church at Denver, Colorado. It is one of the largest contracts for stained glass let for some time.

The Joint Committee W. A. A. and A. I. A. on Government Architectural Practice.

Editors Inland Architect: CHICAGO, May 8, 1888.

At your request I give your readers the following account of the work of the Joint Committee of the Western Association of Architects and American Institute of Architects on reform of the architectural practice of the United States Government.

The committee met in the rooms of the American Institute of Architects at New York, on Thursday, April 19. A bill prepared by Mr. M. E. Bell, former supervising architect of the Treasury Department, and a member of the American Institute of Architects' Committee, was discussed, and after being modified in a few particulars, was adopted as embracing all that could at the present time be secured from congress.

The committee met again at Washington on Monday, April 23, and agreed that it would be inexpedient to attempt at the present time the introduction of its bill without the coöperation of the supervising architect. The bill proposed by the committee was therefore submitted to him, and on Tuesday, by appointment, the committee met Mr. Freret at his office, and devoted the greater part of the day to a discussion of the bill, and to an examination of the management of the supervising architect's office.

We found Mr. Freret an administrative officer of the highest capacity, and found also that he was full of zeal for the reformation and advancement of the work of his office, and for the improvement of the administration of the buildings erected under his care. With that end in view, he had prepared a bill which was introduced in the House of Representatives March 24, 1888, by Mr. Dibble, Chairman of the Committee on Public Buildings and Grounds, of which bill I give you the text. (H. R. 8831, Report Number 1317, read twice, referred to the house calendar, and ordered to be printed.)

In the House of Representatives, March 24, 1888. Mr. Dibble, from the Committee on Public Buildings and Grounds, reported the following bill, relating to superintendence of construction of public buildings:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in all buildings erected under the direction of the Secretary of the Treasury, he is hereby authorized and directed to cause to be set apart, from the moneys appropriated for each building, a superintendence fund for such building, from which fund alone, and from no other moneys whatsoever, shall be paid all expenses of superintendence of construction, including local professional and clerical services, foreman, examination and testing of materials, and all local traveling and incidental expenses pertaining to the supervision of work, and reports thereon, but not including watchmen, when necessary; and the maximum amount of the said fund for each building shall be in proportion to the limit of cost of erection of such building, exclusive of the cost of site, as follows:

Five per centum of all sums appropriated for the erection of buildings limited in cost to $50,000 or less;

Four and three-fourths per centum of all sums appropriated for the erection of buildings limited in cost to $100,000 or less, but more than $50,000;

Four and one-half per centum of all sums appropriated for the erection of buildings limited in cost to $150,000, or less, but more than $100,000;

Four and one-fourth per centum of all sums appropriated for the erection of buildings limited in cost to $200,000, or less, but more than $150,000;

Four per centum of all sums appropriated for the erection of buildings limited in cost to $250,000, or less, but more than $200,000;

Three and three-fourths per centum of all sums appropriated for the erection of buildings limited in cost to $300,000, or less, but more than $250,000;

Three and one-half per centum of all sums appropriated for the erection of buildings limited in cost to $350,000, or less, but more than $300,000;

Three and one-fourth per centum of all sums appropriated for the erection of buildings limited in cost to $400,000, or less, but more than $350,000;

Three per centum of all sums appropriated for the erection of buildings limited in cost to $450,000, or less, but more than $400,000;

Two and three-fourths per centum of all sums appropriated for the erection of buildings limited in cost to $500,000, or less, but more than $450,000;

Two and one-half per centum of all sums appropriated for the erection of buildings limited in cost to any sum exceeding $500,000, or appropriated in excess of the limit of cost previously fixed by law, or where no limit of cost has been fixed by law; *provided*, that where a building is in process of erection at the time of the passage of this act, then the sum to be so set apart shall be rated as aforesaid, in proportion to the balance remaining unexpended of the sum fixed by law as the limit of cost of such building, without reference to any expenditures for superintendence incurred prior to the passage of this act.

SEC. 2. That the total expenditures at any time from the superintendence fund of any building, when compared with the total expenditure at the same time in the construction of such building, shall never exceed the percentage prescribed for superintendence of construction of such building in section 1 of this act.

It will be seen that this bill, though very far from accomplishing all that is desired by the profession, is quite a long step toward the realization of the reforms proposed by our professional organizations. Mr. Freret proposes hereafter to confine appointments to superintendentships of the different government buildings to professional men — architects or civil engineers — with whom contracts are to be made covering the period of erection of their respective buildings.

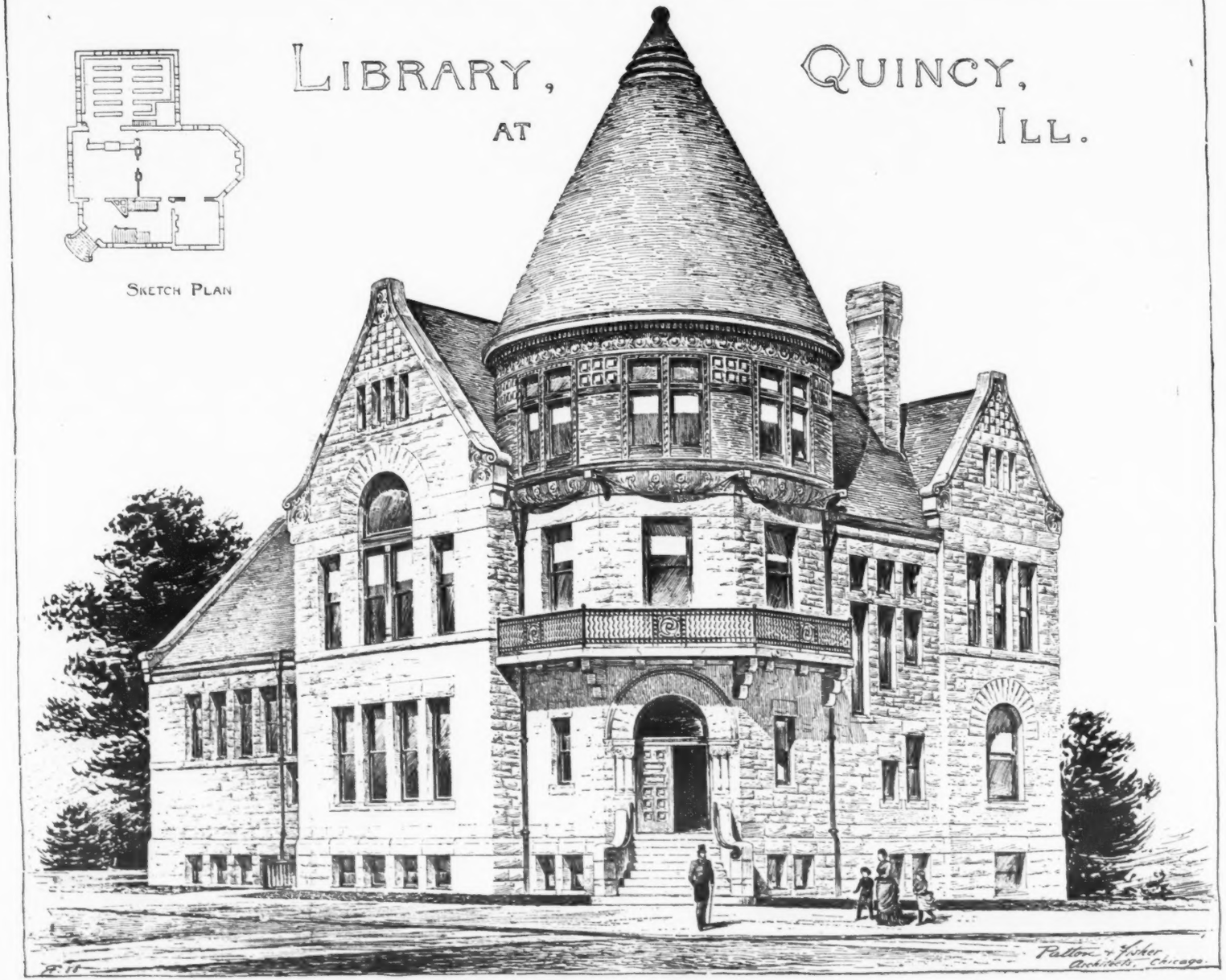
Upon the matter of causing the designs of government buildings to be made outside of the office of the supervising architect by the victors in competitions arranged specially for each particular building, we found that Mr. Freret did not agree with our committee nor with the profession at large. We believed, however, that the intentions of Mr. Freret were of the best, and were convinced that a little more experience in the management of his office would demonstrate to him the futility of his efforts to produce the highest grade of work (which he is undoubtedly striving for) when his own time is taken up with so many details of administration, and when this work is crowding on him to such an extent (there are now in hand eighty buildings, costing upward of $21,000,000) that even were he relieved from the routine of administrative work, he would find that no one mind could do justice to the artistic requirements or solve the engineering problems incidental to such an aggregation of buildings. It is our belief that Mr. Freret is honest, ambitious and zealous, and that he will, as soon as he has felt the full force of the difficulties which beset him, conclude with us that if the national government is to secure architectural service at least equal to that engaged by its individual citizens, it must desist from burdening a single official with tasks sufficient for any twenty of the best architects in the country. We therefore deemed it expedient to postpone the introduction of the bill prepared by Mr. Bell, and amended by the committee, to a future date, when we hope Mr. Freret will join with us in our support of that or a similar bill.

Our examination of the working of the supervising architect's office was most interesting. We noted that Mr. Freret is endeavoring to award

Nos 298-300-302-304-306 Dearborn Street Chicago
for Messrs John T. Dale and S.E. Hart
THOS. HAWKES ARCHITECT.

LIBRARY, AT QUINCY, ILL.

SKETCH PLAN



Patton & Fisher Architects Chicago.

RESIDENCE FOR NATHANIEL S. JONES, CHICAGO.

S. S. BEMAN, ARCHITECT.

FRANK L. WRIGHT, DEL.

HOUSES FOR WILLIAM WALLER, CHICAGO.

J. L. SILSBEE, ARCHITECT.

RESIDENCE FOR NATHANIEL S. JONES, CHICAGO.

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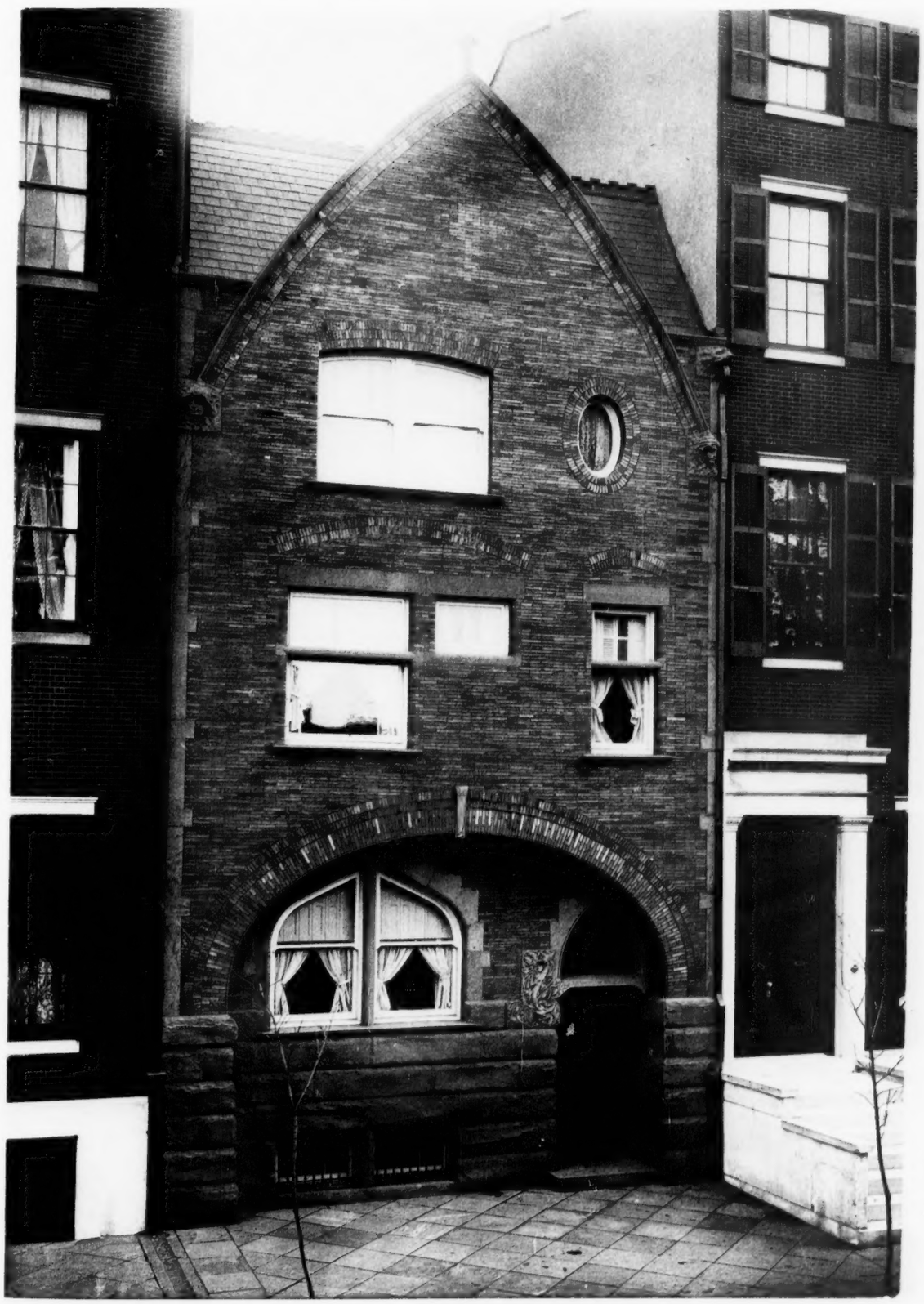

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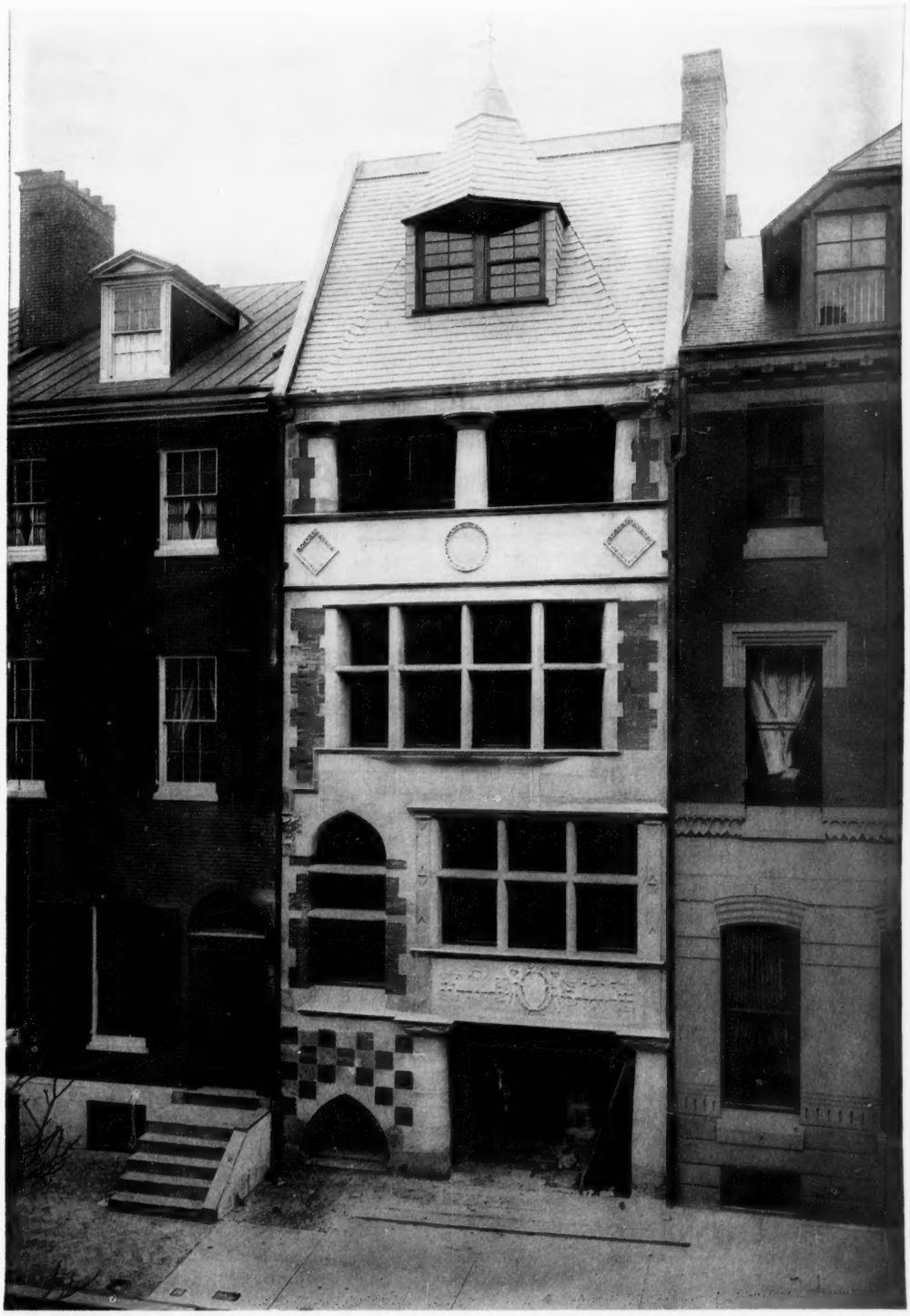
RESIDENCE FOR RODMAN WISTARS, PHILADELPHIA, PA.

WILSON EYRE, JR., ARCHITECT.

STORE ALTERATIONS, PHILADELPHIA, PA.

WILSON EYRE, JR., ARCHITECT.



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UNIVERSITY CLUB HOUSE, PHILADELPHIA, PA.

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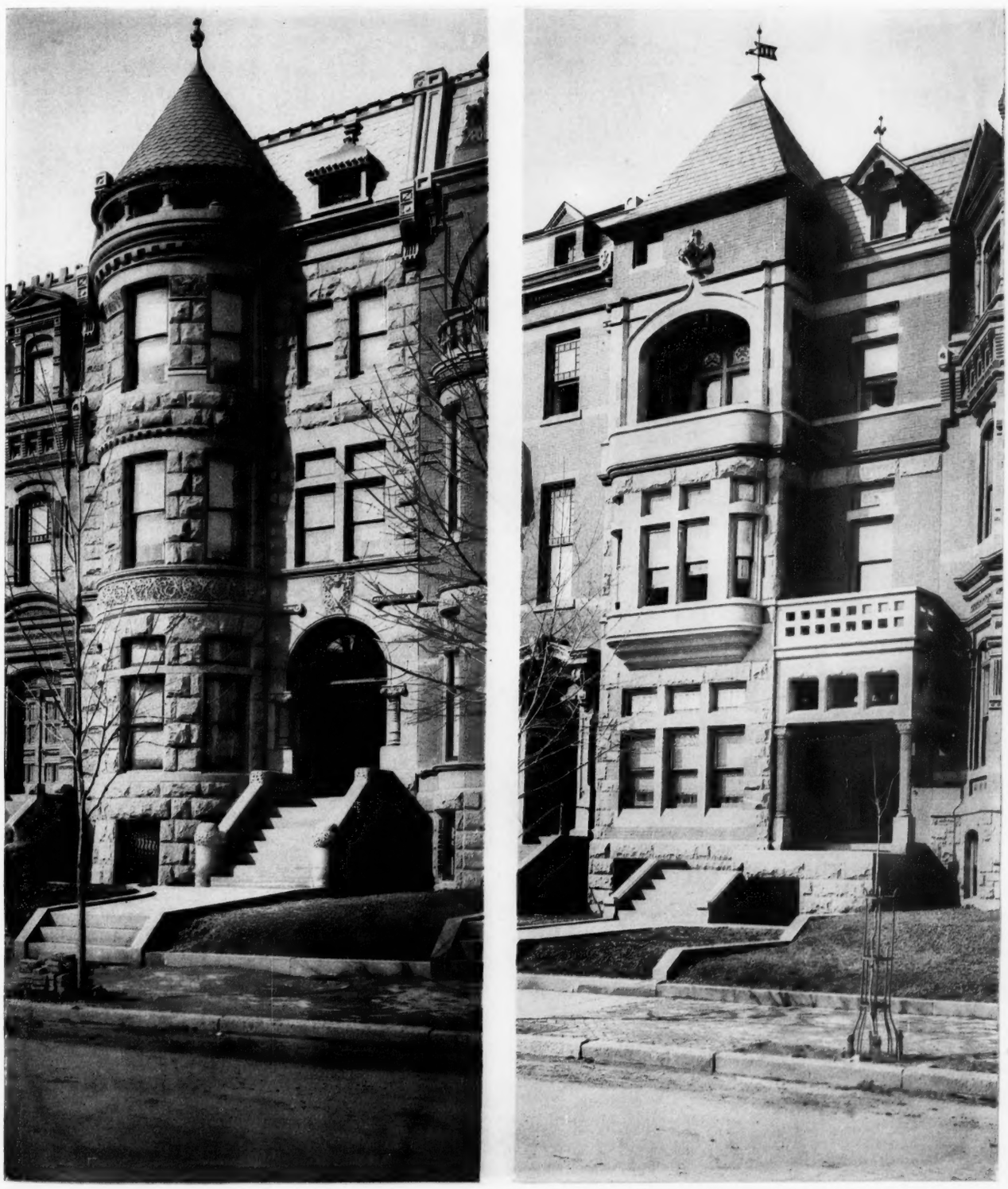

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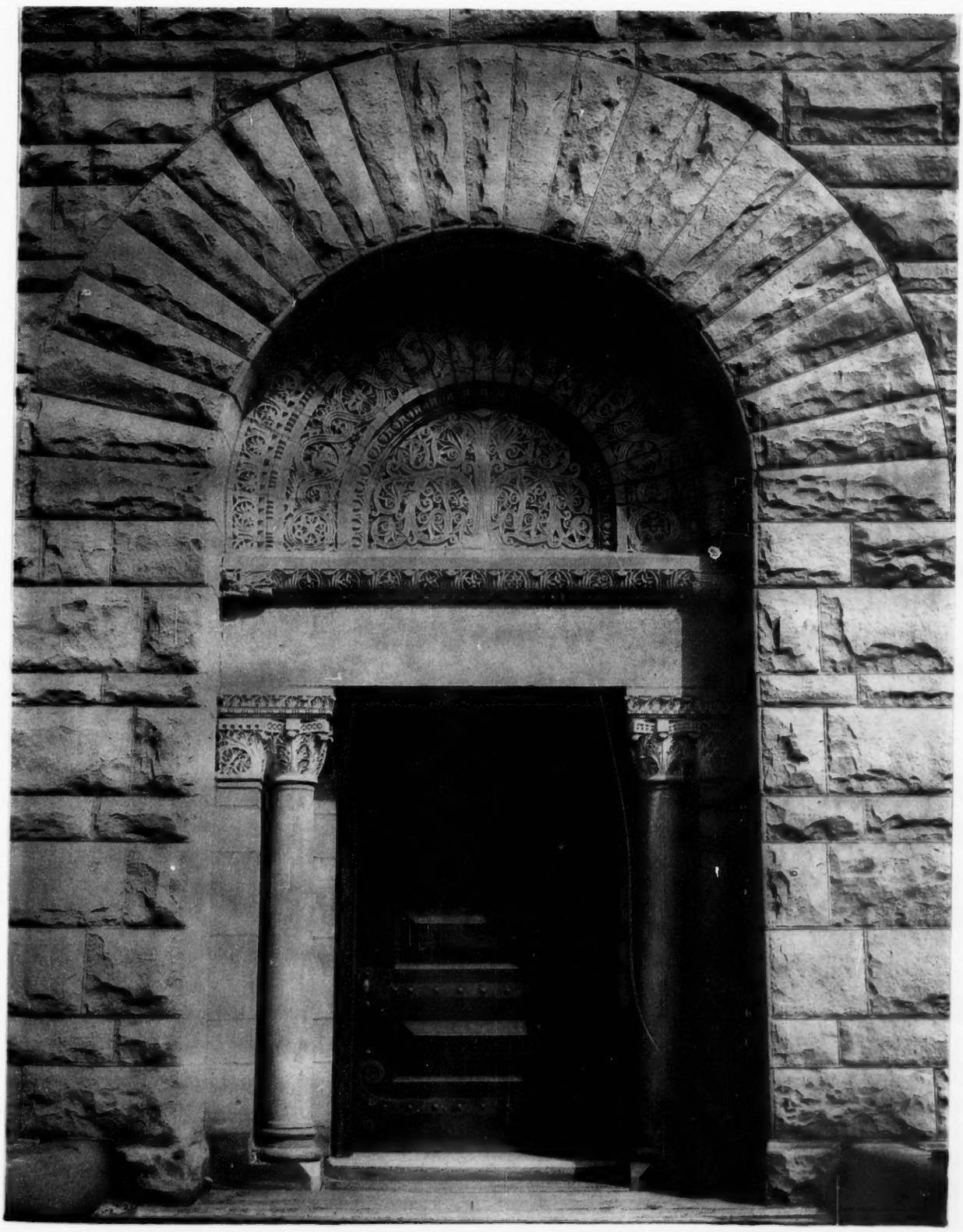
RESIDENCES, WASHINGTON, D. C.



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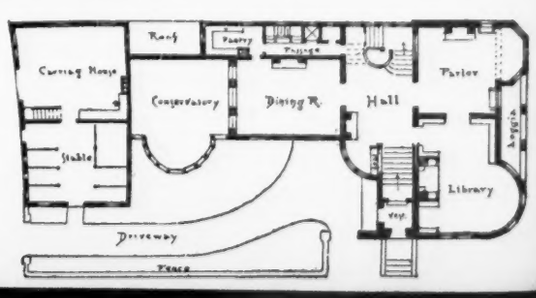
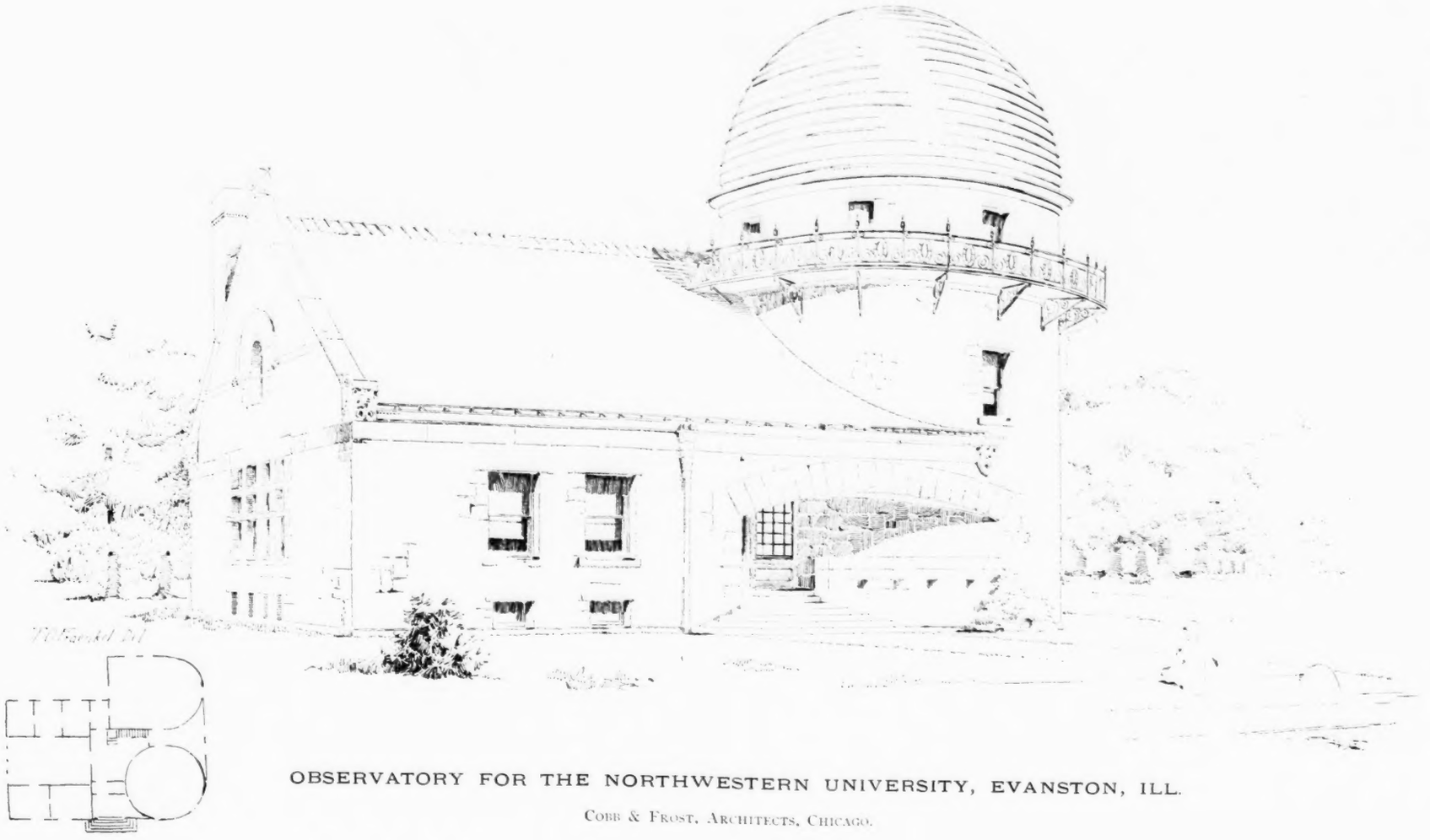
ENTRANCE TO RESIDENCE OF FRANKLIN MAC VEAGH, CHICAGO.

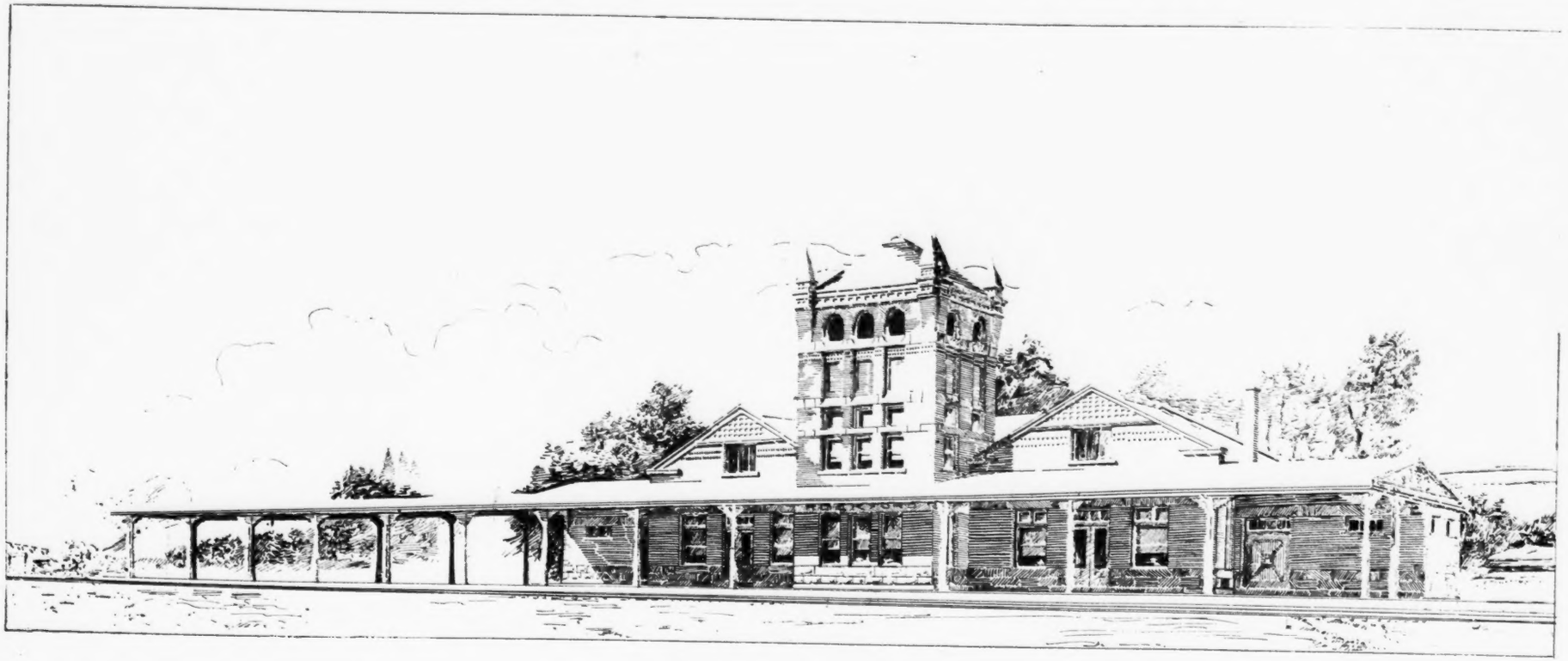
H. H. RICHARDSON, ARCHITECT.



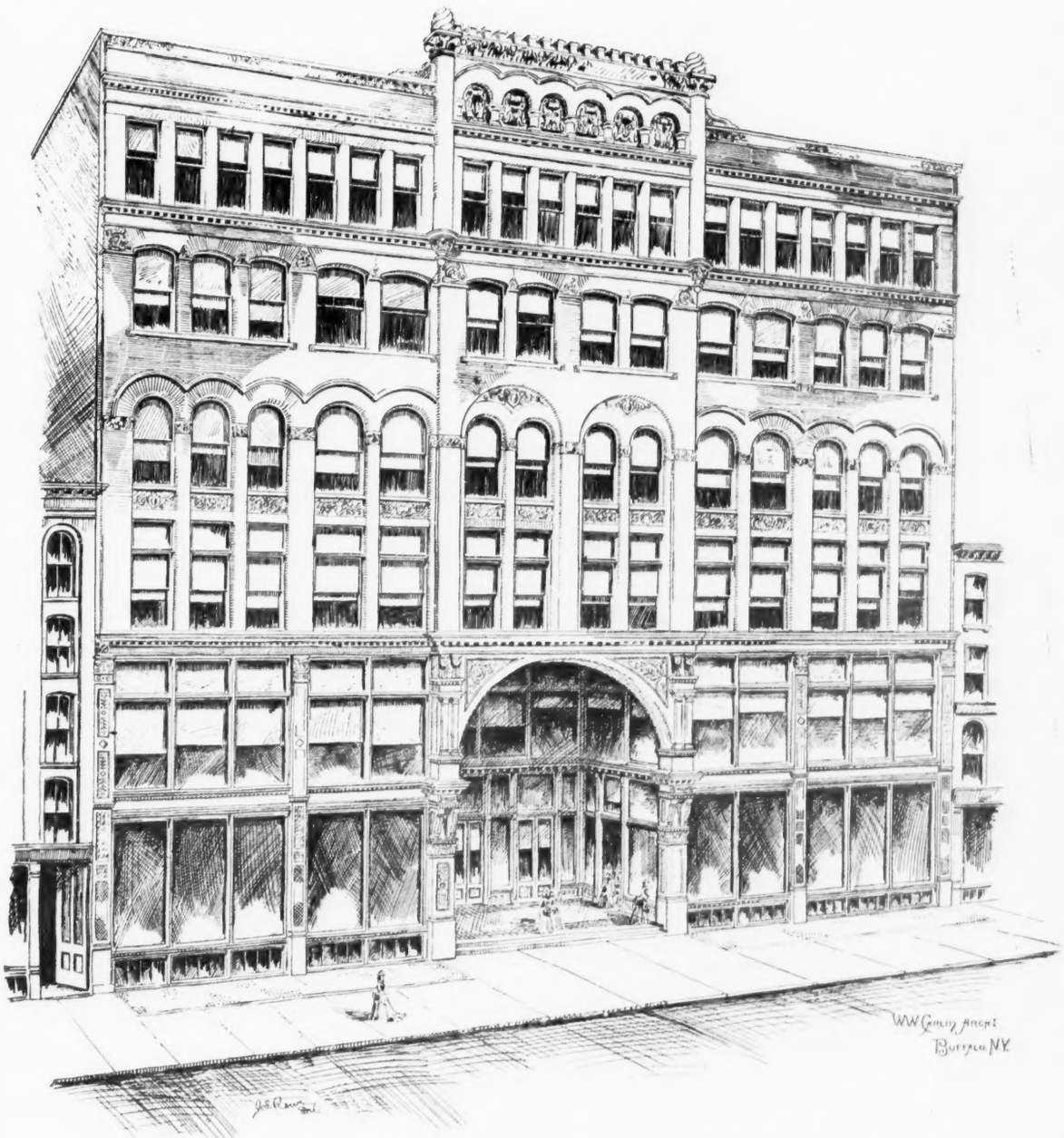


OBSERVATORY FOR THE NORTHWESTERN UNIVERSITY, EVANSTON, ILL.

COBB & FROST, ARCHITECTS, CHICAGO.



Railway Passenger House
Rockford Illinois.
for C.M.&N.R.R.
Henry Schlacks Des.& Del.



STORE BUILDING FOR C. J. HAMLIN, BUFFALO, N. Y.

W. W. CARLIN, ARCHITECT.

all of the contracts for each proposed building at one letting, thereby doing away with the irresponsibility of the system heretofore in vogue, under which contracts for buildings were let piecemeal, so that the ultimate cost of a building could never be even approximately ascertained until it had been completed. We found the system of control over the work of the office an admirable one. Mr. Freret has a system of tables and records, written up each day, which show him at a glance the state of progress not only of the general drawings and specifications of each building, but the status on the evening of the preceding day of every drawing for each building, and also of the work done by each employé of the office on the preceding day. An efficient system of control over the voluminous correspondence of the office has also been introduced. Each letter sent out is typewritten in triplicate, one copy being sent to its proper address, one sent to the auditing or disbursing officer interested in the subject matter of the letter, and the other kept on file in the supervising architect's office with the papers of the particular building to which the letter relates, and finally a letter-press copy is preserved as before in the general correspondence of the office.

The following figures will give an idea of the magnitude of the operations of the office: The number of letters received within the past year is nearly 35,000. The number of letters written during the same period is nearly 30,000. Within the past ten months nearly 200 contracts have been let, and there are now in the course of erection under the control of the office over 80 buildings, aggregating in cost, according to act of congress, $21,528,000. Besides these new buildings, there are upward of 200 old buildings, the maintenance and repairs of which are under the control of the supervising architect and require constant attention.

The committee was astonished to note the inadequacy both as to space and light of the rooms at the disposal of the office, and the insufficiency of the clerical force employed. For the immense volume of work before stated but fifty-six persons are employed in the drawing rooms, among whom are ten ladies, employed as tracers. As may be expected from this, the number and character of the drawings furnished for each building are not up to the mark of the practice of our larger and better private offices. This is due to the insufficiency of the appropriations, and not chargeable to Mr. Freret.

It is difficult to determine which is the better practice, the present one of making complete drawings and specifications of each building before letting contracts at the risk of having these too limited in number and too small in scale for efficiency of service, or the practice of preceding administrations, of making a larger number of drawings to larger scale, but leaving the office always months and sometimes a year or more in arrears with its work. Either condition of things is a disgrace to our government, and is one of the most potent causes of that disproportion between outlay and result which has become so characteristic of our government buildings.

A reform is demanded, and an adequate measure of reform will not have been secured until the Government of the United States has secured professional service for its architectural work, at least equal to that employed for the erection of the larger and better private and semi-public buildings throughout the country.

Mr. Freret has been kind enough to send me lithographic and photographic copies of the drawings of quite a number of the buildings for which contracts are now being let, and also copies of his specifications, to the inspection of which the readers of THE INLAND ARCHITECT are cordially invited.

Yours very truly,

D. ADLER.

The Indianapolis Monument Competition.

Editors Inland Architect: INDIANAPOLIS, Ind., April 28, 1888.

In your very handsome report of the entire competition for the State Soldiers' and Sailors' Monument occurs one mistake, which I take the liberty to call attention to, since it was, doubtless, only a misapprehension of facts that led to it, and because that misapprehension was quite general among architects and architectural and art journals in the early days of preparation for the competition.

In your article, on page 47 of the April number, you say, "when the first circular was issued in compliance with the law and found to outline a form of competition which the architectural profession would consider it unprofessional to enter into, and being so informed by their secretary and also by THE INLAND ARCHITECT, they recalled the circular and proceeded to ascertain upon what plan designs from the best architects in the country or in the world, could be obtained."

If you will now examine the circular referred to, again, a copy of which I inclose, you will find that it contained nothing that was afterward withdrawn (except that the limit of cost was afterward made $200,000 instead of $220,000). Also, that there was nothing in the circular incompatible with the code and instructions as afterward framed and issued. And, as a matter of fact, the circular was not withdrawn, but was extensively circulated, and we continued to circulate it to some extent even after it was supplanted by the perfected code, which the circular promised to those who might wish to compete.

The law required that advertisement should be made at once as soon as the board should be organized. The advertisement contained in the circular was framed only ten days after the first meeting of the board, and was only intended as a preliminary announcement. All questions as to the methods to be adopted in the competition, code, terms and information, were by the circular expressly left to be settled upon afterward, and the selection of the experts in advance was promised, and those wishing to compete were expressly referred to that future information, and told how to obtain it.

The only object I have in asking for this correction is that it may clearly bring forth two things, first, the value of care in preparing to issue information and codes for future competitions, and secondly, the importance to architects that they should not hastily form misconceptions of the intentions of committees having charge of public works, but rather await the decisive features they may put forth after actual deliberation. Nearly all committees composed of business men actually desire to obtain designs that are good in art, and will be creditable to their authors, and those who have discerned their merits. But architects and artists who are earnest and capable are very apt to bristle with criticism and take sudden stand against measures that are adopted by such committees, because such measures seem to be founded on the main idea that business men are permeated with, that of the main chance. While it is perfectly natural for designers to protest against such measures, because of the unfortunate experiences of the past, and because they know they are false in economy, it should be remembered that business men are honest enough in believing their way is the best way, and if intrusted with a public duty on building committees they feel bound from the moment they accept that duty, to try to get as much as they can for the amount of money placed at their disposal, even if they have to establish a sort of a gambling game to do it, though it is only fair to state that they do not realize that their game is only a sort of gambling. If the architects can demonstrate a few times that it pays better to provide honest competitions, where merit will be most likely to win, it will not take long to get the business world over to their way of thinking, and so inaugurate an art era. But to do this their suggestions, arguments, criticisms and statements must be not only reasonable and temperate, but above all they must be timely. Principles may be enunciated with every force at command and cannot be too constantly insisted on. But their special application to special acts of committees already constituted, and perhaps already committed to certain courses of action, can only be effective when obviously good tempered, fair and generous, is the spirit in which they are advocated.

Very respectfully yours,

J. F. GOOKINS,

Secretary State Soldiers' and Sailors' Monument Commission.

Illinois State Association of Architects.

THE regular monthly meeting of the Illinois State Association of Architects was held Saturday, May 5, President Samuel Treat in the chair.

The following members were present: C. L. Stiles, Geo. Beaumont, Clinton J. Warren, N. S. Patton, D. Adler, R. C. Berlin, W. W. Clay, S. A. Treat, L. J. Schaub, Alfred Smith, L. D. Cleaveland, S. M. Randolph, O. J. Pierce, J. W. Root, Fred Baumann. S. J. Artingstall, city engineer, was present at the invitation of the president:

The first order of business, the reading of the minutes of the previous meeting, was dispensed with. Upon the call of the president for the report of committees, Secretary R. C. Berlin, in behalf of the Executive Committee, reported that among other subjects which came up for consideration before the committee was that in regard to permanent quarters. The committee had taken some steps in that direction, but nothing definite had been decided upon, and it was the wish to learn the views of the members that the subject was reported upon.

A brief discussion ensued, participated in by the president, Messrs. Berlin, Randolph, Root, Clay, and Patton, in which was expressed the sense of procuring permanent quarters, furnishing and decorating them, and the matter thus outlined was referred to the Executive Committee to act upon during the summer—there being but one more session in the present term—and to report at the first fall meeting to the association a plan, including costs, etc.

The President: The next business in order is the discussion of the resolution introduced by Mr. Patton at the last meeting. The secretary will read it.

Secretary Berlin read the resolution, as follows:

Resolved, That it shall be considered unprofessional conduct for a member of this association to allow anyone in his employ to do work in his own name as an architect, and this shall be construed as meaning that all architectural work done by employés, either during or outside of office hours, shall be done in the name of the firm, and the compensation for said work shall be paid to said architect or firm. If any member of this association shall violate the above resolution, it shall be considered sufficient cause for expulsion from the association. Any case accruing under this rule shall come before the Executive Committee, whose action shall be final, as provided for in cases of discipline.

The President: I suppose you all have your ideas formulated and are ready to speak to the resolution.

W. W. Clay: Mr. President, I don't know that I have got anything to say against or in favor of the resolution. It is one of those things the more you think of it the more you think it is better not to say anything about it. Of course, we all understand how difficult it is for young men to make a start in the profession, and perhaps is more keenly appreciated by those who got their start by doing a little work behind the scenes. It is something, however, that can hardly be reached unless by proper legislation, and I think Mr. Patton, in his explanation introducing the resolution, distinctly set forth this fact, and that it more than any other prompted him to make a resolution of this kind. Of course there is a question of injury, if not in a financial, yet in a professional point of view, in the fact of a young man occupying the position of draftsman doing work outside of office hours, and in my own case I prefer not to have an employé do so; yet I think an arrangement could be made between the architect and his draftsman by which the draftsman could take a certain class of work without the architect losing his client. He need no more lose a client by sending him to his employé for certain work than need a merchant in directing one of his customers to a salesman. Perhaps it would be best to refer the matter to our executive committee, with the understanding that they extend an invitation to a limited number of draftsmen, for the purpose of talking it over together, before we take any position in the matter. They would then have an opportunity to state their views; or perhaps it would be well to invite them to meet with us in the discussion, and in that way come to a harmonious solution of the question. That would be my idea. While I feel that something ought to be done to regulate this matter, I do not feel like incurring the whole responsibility.

John W. Root: I agree with Mr. Clay. I think it would be very unjust to the draftsmen to adopt this resolution without giving them an

opportunjty to be heard. Personally, I am opposed to the resolution, because I think the subject can be satisfactorily arranged by private agreement. I do not think there are many draftsmen who do work outside of office hours; and so far as draftsmen cutting fees is concerned, there is no more danger from that quarter than there is from persons who do not belong to this association. Where draftsmen undertake to make plans it is ambition that impels them more than fees, and one with natural pride would not be likeby to underestimate his services more than any architect of moderate practice. Very often draftsmen are given work by their friends to give them a start, and their work would not be given to their employers as it was simply given to their draftsmen to help put them on their professional feet. The only question that can seriously affect architects when their draftsmen do work of this nature is when such outside work interferes with the just work of the draftsman during his employer's hours. As far as we are concerned we have an arrangement with our draftsmen that they are not to do work outside of the office, but it is not enforced very strictly—that is, we do not go out of the way to find out whether they do or not. I do not go around to learn whether they are doing outside work, and unless I should find in the daily work of the office that they are slack, then I should feel it a ground of interference. It seems to me by insisting on such a rule as proposed by this resolution we could not expect the draftsmen to take kindly to it, and would certainly be inciting them to organize into a trades union.

Mr. Clay: What do you think of licensing architects?

Mr. Root: That is the solution of the whole question.

Mr. Clay: While it would do you no injury, the cutting of rates, it would give the man a lower standard when he made a start.

Mr. Root: As a body, we have defined our position; we have declared in a general way what shall constitute an architect as distinctly as have the medical and legal professions, but we can no more interdict the lowering of fees than we can a carpenter lowering his wages or a merchant or grocer from cutting prices, and they all do it. It seems to me that the draftsmen and ourselves are so closely allied that we must hold in respect each other's rights—the draftsman of today is the architect of tomorrow.

Mr. Patton: When I brought this resolution before the association, I did so at the request of other members, and I have no more personal interest in it than any other member. We, as a firm, are served by competent draftsmen, and we have never lost work by a draftsman getting the work. If such had been the case, I would not have come before the association with the complaint, by a resolution or otherwise. The remarks that have been made do not, as I view it, touch the real question. If it was simply a private grievance in our offices; if it was the question of a draftsman derelict in his office work, we could settle that matter quickly by discharging him. It is a question, as I view it, of the draftsman in our office doing outside work that comes in competition with men professedly in the profession. Often those who do this work help themselves to material in the offices where they work, which they have no right to, and doing the work outside are at no expense whatever. Suppose we do not care for the class of work which go to these draftsmen, there are young men, beginners in the profession, who do care, and would like to get it very much, and are, or may become members of the association. This is the question: Whether we can, in honor, allow such a competition against them from our offices, even if indirectly. In the cutting of fees we cannot reach architects who are not members of this organization, but we owe it to ourselves to protect each other. If we are not paying draftsmen enough for their services, and compel them to go outside to earn what is lacking; if this is the case, then we should pay them enough. I am not questioning the right of a draftsman to his time outside of the office, or to the use he makes of it, providing it does not infringe upon his employer's rights; but, I do think we should not permit him, knowingly, to compete with architects affiliated with us who have to maintain an office when his work is all clear profit. It may be said we have no control over the offices of members of this association; that to attempt it would be infringing upon their rights. When the draftsmen of members enter into competition with other members of the association, we have a right to enter protest. This is the ground upon which I drew this resolution. I do not care whether it is passed in this form or in any other. It is now in the hands of the Committee on Professional Ethics of the Western Association, and to have an expression of the state associations, I think desirable, on the part of that general committee. I understand the draftsmen are in arms against the resolution. I have not heard anything to this effect in our office, and I do not believe there is any general protest on their part. It is possible that some who have been in the practice of pirating on the profession may be in arms. It is very natural they should be. There are not many pirates, yet the government of the United States considers it necessary to have a law against piracy. As a class the draftsmen of this city are not piratical in their tendencies. No greater number of them are pirates than are to be found among sailors, but it has been known that draftsmen have taken advantage of their employers, stealing from their plans, copying them, making only a few alterations, and putting it out as their own work. I leave the matter just here.

The Chair: I think we should leave the matter in some tangible shape. I would suggest that the draftsmen have a meeting with us.

Mr. Clay: Mr. McLean, can you give us the feeling among the draftsmen?

R. C. McLean: Mr. Geo. Beaumont, who is a member of this association, is president of the Sketch Club, and present. He can answer you better than I.

Mr. Beaumont: I would like to say in regard to this resolution that the draftsmen have not taken the slightest notice of it, nor has it caused any ill-feeling among them. I wish to refer to what Mr. Root has said in regard to the draftsmen forming a trade union. At the formation of their association, pains were taken to select those of the highest standing, as the object for forming the association was to uphold a high professional standing. It was spoken of, and the understanding was that it was in no sense to be looked upon as a trade union, and the sentiment was, and is, averse to the views of the members of the organization, and I can assure you the draftsmen of Chicago will never consent to commit themselves to a trade union. I think Mr. Patton wandered a little away in his remarks in regard to draftsmen taking work while in the employ of architects. If a draftsman's name is allowed to be on the door of an architect's office and he should take work outside on his own account, the offense cannot be so serious. Now, I think there is a way out of this difficulty. We might copy from the practice of the medical and legal professions by establishing a standard of requirement. In Europe—in England, France and Germany, the standard of the profession is established, and the distinction between the architect and draftsman defined. When a draftsman concludes to do work on his own account, he starts an office; and if he finds his business is not large enough to pay his expenses, he goes to his old employer and tells him he has not enough work to keep him busy all the time and will be very willing to assist him. It is the custom of old established architects to give employment of this kind, and the beginner has the opportunity to commence in a small way for himself. This is the custom in England, France and Germany, as I know by personal experience.

S. M. Randolph: Mr. President, it seems to me we are not in this discussion taking the wisest course to benefit the profession. It seems to me, sir, in place of making a point that prices should be kept up, the better way is to keep them up. Years ago I used to think it would be a good thing to have a code, but the longer I am in business the more I feel like saying to my clients, if you wish to get satisfactory work you must give its equivalent; you may get it done for less, but you cannot and get the best work. As Mr. Beaumont says, a draftsman might start out on his own responsibility, but he should get full prices. He should say to the owner, if you give me the work I can give it more time than those who are busier and give you better service; and for my part, if such an one would come to me for employment, if I had more than I could attend to, I would be glad to employ him. I have found that good service is worth all it costs. Our highest fees cannot be earned by everybody. The idea of making, as it were, a trade union by selfish ruling is detrimental to the profession. Merit alone is the true standard of prices. I remember a story told of Mr. Jenney. A gentleman called at his office and asked him what his fees were. He told him so much. "Oh," said the man, "I can get it done cheaper than that." "If," said Mr. Jenney, "you are looking for a cheap man, here is the card of a gentleman who will do it for less." I do not think we are getting one cent too much at our highest fee, and anybody who will do the work for less will either lose money or give bad service.

Mr. Patton: I don't think that touches the exact point. It is not a question of architects cutting rates. It is a question of a draftsman being able to do work at 3 per cent when an established architect cannot afford to do it for less than 5, as it is all clear gain to the draftsman, he having no office or other expenses to come out of it.

Mr. Root: I think, Mr. President, one of two things should be done: Either to ask a certain number of draftsmen to come to a future meeting and discuss the matter with us, or that the subject be left where it is, as it is already virtually in the hands of the committee of the Western Association on ethics—a competent committee with an able chairman, whose work will be thoroughly done, and you will find this subject will be amply taken care of. We had better leave that committee entirely free and unbiased. I am in favor of so leaving it, and I move you, therefore, we lay this resolution on the table. The motion, receiving a second, was carried.

The Chair called attention to the fact that he had been appointed chairman of the committee of the association on uniform contracts, which is to meet with the joint committees on the same subject of the Western Association of Architects, the American Institute of Architects and the National Association of Builders, in New York, in June, and asked for some suggestions.

A desultory talk ensued, participated in by Messrs. Pierce, Root, Patton and Baumann, on the conclusion of which the meeting adjourned.

Mosaics for Interior Decoration.

AT a meeting of the Edinburgh Architectural Association held April 6, Mr. Thomas Bonnar read a paper on "Mosaics Suitable for Interior Decoration." He spoke of the arabesque style of mural decorative art, which had been associated with that of the mosaicist from the earliest times. As that form of art had been considered a charming and simple method for giving play and grace to the walls of the corridors of the Palace of the Popes, in the hands of no less an artist than Raphael and his most skillful pupils, he suggested that it ought to be accepted by them as an appropriate agent in the embellishment of the walls of modern halls and staircases. It could also be readily adapted to the more elaborate ornamentation of the walls of drawing-rooms and boudoirs without coming into undue competition with the higher art functions of framed pictures. Having referred to various examples of the mosaic art to be seen in some of the churches of Italy, he said it was pitiful to witness the feeble and mechanical manner in which these grand old mosaics were being dealt with by the so-called work of restoration now going on. He had no intention of suggesting that mosaics should be employed as mediums for the delineation of the higher or pictorial art, but he maintained that they were singularly suited for the representation of the purely decorative forms, consisting of allegorical subjects or such like, and in the treatment and embellishment of our churches, public buildings, and homes. Describing the manner in which the work was carried out, the lecturer said the method adopted by the ancients was very similar to that practiced in the present day. Among the many simpler decorative arts which were freely practiced by ladies, he would recommend the mosaicist's as being in many ways suitable. It would be found by those who handled it with spirit the most effective and capable of rewarding them with pleasure, and if successfully carried out, either in the production of natural or conventional forms, it would add a striking feature and become a useful accessory in the decoration of their homes. It might be applied to the enormous masses of black and white marble mantelpieces; for who had not got one of these unsightly objects which had to be apologized for when an otherwise picturesque room was being admired or criticized? The same sphere

for treatment was to be found in the hearth; and it could also be applied in forming a dado of variegated tints, which would answer the purpose of the ordinary wood dado and be infinitely superior as a decorative medium. Mosaic decoration should also be employed, both as regarded effect and expense, for the entrance halls, floors, walls and ceilings of the better class of houses, and in all public buildings, banks and insurance offices.

Association Notes.

AMERICAN INSTITUTE OF ARCHITECTS.—A. J. Bloor, 18 Broadway, New York, secretary.

WESTERN ASSOCIATION OF ARCHITECTS.—Fifth annual convention will be held November 16, 1888, at Chicago. Normand S. Patton, Chicago, secretary; W. L. B. Jenney, Chicago, secretary of foreign correspondence.

NATIONAL ASSOCIATION OF BUILDERS OF THE UNITED STATES OF AMERICA.—Second annual convention will be held the first Tuesday in February, 1888, at Cincinnati. Wm. H. Sayward, Boston, secretary.

ILLINOIS STATE ASSOCIATION OF ARCHITECTS meets the first Saturday of every month. Annual meeting first Thursday in October, 1888. R. C. Berlin, Chicago, secretary.

WESTERN NEW YORK STATE ASSOCIATION OF ARCHITECTS meets second Tuesdays of October, February and June of each year. Annual meeting in October. Next annual meeting at Buffalo. W. W. Carlin, Buffalo, secretary.

WESTERN PENNSYLVANIA STATE ASSOCIATION OF ARCHITECTS.—E. O. Danse, Pittsburgh, secretary.

MISSOURI STATE ASSOCIATION OF ARCHITECTS meets at St. Louis, on the second Tuesday in January, 1889. E. F. Fassett, Kansas City, secretary.

THE ARCHITECTURAL ASSOCIATION OF IOWA, annual meeting, second Wednesday of February, 1889. Next meeting, August 14. F. D. Hyde, Dubuque, secretary.

THE ARCHITECTURAL ASSOCIATION OF MINNESOTA meets every other Tuesday at Minneapolis and St. Paul alternately. Annual meeting January 8, 1889. F. G. Corser, Minneapolis, secretary.

KANSAS STATE ASSOCIATION OF ARCHITECTS meets at Topeka on the third Tuesday of January, 1889. J. C. Holland, Topeka, secretary.

ASSOCIATION OF ALABAMA ARCHITECTS.—Annual meeting second Thursday in October. John Sutcliffe, Birmingham, secretary.

ASSOCIATION OF OHIO ARCHITECTS meets annually. Next meeting third Thursday in August, 1888, at Cleveland. F. A. Coburn, Cleveland, secretary.

ASSOCIATION OF TENNESSEE ARCHITECTS meets quarterly. Annual meeting third Thursday in February, 1889, at Memphis. Next quarterly meeting, first Tuesday in June. W. C. Smith, Nashville, secretary.

ASSOCIATION OF TEXAS ARCHITECTS meets at Waco on the third Tuesday of January, 1889. W. W. Larmour, Waco, secretary.

KENTUCKY STATE ASSOCIATION OF ARCHITECTS meets at Louisville first Thursday in each month. O. C. Wehle, Louisville, secretary.

LOUISIANA STATE ASSOCIATION OF ARCHITECTS meets first Wednesdays in May, August, November and February. Annual meeting in February. W. C. Williams, New Orleans, secretary.

KANSAS CITY SOCIETY OF ARCHITECTS meets Monday afternoon of each week, at 4 o'clock. Annual meeting second Saturday in April, 1889. F. B. Hamilton, secretary.

NEBRASKA STATE ASSOCIATION OF ARCHITECTS meets first Wednesdays in January, April, July and October each year. F. M. Ellis, Omaha, secretary.

WISCONSIN STATE ASSOCIATION OF ARCHITECTS meets first Monday of each month. Annual meeting first Monday after first Sunday in January. Howard Russell, Milwaukee, secretary.

BUFFALO SOCIETY OF ARCHITECTS meets first and third Tuesdays each month. W. W. Carlin, secretary.

THE CHICAGO ARCHITECTURAL SKETCH CLUB meets every alternate Monday at the club's headquarters, Art Institute. G. W. Williamson, secretary. Annual meeting, November 5, 1888.

CINCINNATI BUILDERS' EXCHANGE.

A special meeting of the exchange was called last week in conjunction with the Cincinnati Chapter of Architects, regarding the mutual adoption of rules and conditions under which estimates should be submitted by contractors in the building trades. The meeting was in accordance with the report adopted at the last convention of the National Association of Builders, and the provisions of that report were considered. About one hundred members of the exchange and architects were present.

Mr. L. H. McCammon presided, and there were present on behalf of the architects President Charles Crapsey, of the Cincinnati Chapter of Architects; James W. McLaughlin, A. C. Nash and others.

Twenty-one articles were taken up, section by section, and although they met with the approval of the architects' committee, yet it was not within their province to decide upon their adoption.

The architects requested that the Builders' Exchange appoint a committee of three to meet a like committee of the architects, and they will submit a report to both branches. President McCammon appointed Amos Tooker, H. E. Holtzinger and Edward T. Livezey to represent the Exchange.

The articles considered provide for a scale of drawings, complete plans and specifications, indefinite depths of foundations, specifications to be the guide for estimating, the grouping of special work, cutting and jobbing for other mechanics, rights of lowest bidders, the compensation that lowest bidders shall be entitled to when bids are refused, the security to be exacted, rights of sub-bidders in the hands of architects and contractors, premium on completion of contract before the specified time, award of contracts, and many other matters of vital importance to builders, architects and contractors.

The Committee on Technical Schools, Messrs. Colter, Holtzinger and J. Milton Blair, who were appointed to confer with the High School Trustees, reported progress.

The committee appointed to draft a lien law made a report that the National Association of Builders were at present considering a law that would affect all states and cities, and until they took some action the committee deemed it best not to recommend any plan. Their report was accepted and the committee discharged.

CHICAGO QUARRY-OWNERS' ASSOCIATION.

The first annual banquet of the association was given at the Grand Pacific Hotel, April 17, the stone contractors and officers of the Journeymen's Union being invited guests. The menu was excellent, and the speeches full of information regarding the stone interest, past and present. The table was arranged in the form of a keystone. John Ramle was chairman, and A. F. Shuman acted as toastmaster.

The annual meeting of the association was held April 17, and the following officers were elected for the year:

President, John Rowle; vice-president, Robert Harper; secretary, A. F. Shuman; treasurer, E. T. Malone; executive committee, C. G. Singer, E. E. Worthington, J. S. F. Batchen, John Worthy and C. B. McGenness.

BUFFALO ARCHITECTURAL SKETCH CLUB.

The club have gone into new quarters, which are fitted up very conveniently, and the meeting of the club will be held there every Friday evening. The second competition of the year has just been closed. The subject was a gate lodge, and in the opinion of the judges a very creditable set of designs were submitted.

EDINBURGH ARCHITECTURAL ASSOCIATION.

The members of the Edinburgh Architectural Association on April 5 visited the old mansion house of Bonhard, under the leadership of Mr. Thomas Ross. Bonhard House stands on the rising ground which separates the Linlithgow valley from the Firth of Forth, at about two miles from Linlithgow. The house is a lofty, massive structure of the L plan, with a staircase, tower, and entrance in the reëntering angle. It has for many years been occupied by farm laborers. It is because of the fine plastered ceilings, enriched with moldings and ornamental devices, wood-paneled walls and fine mantelpieces, that Bonhard is so well worthy of a visit from the architectural student. Before reaching the house an old dovecote is passed, containing in a panel in its west gable all the lettered and heraldic history in stone now remaining of the old family of Cornwallis of Bonhard, who held this property for many years. After inspecting Bonhard the party visited Grange Pans House. It stands above Bo'ness, overlooking the Firth of Forth. The house of Grange is of a different type from Bonhard, and erected twenty-seven years later. It is a fine specimen of the kind of house built at the time when the ideas of defense against hostile attacks were just beginning to give way to those of security and comfort, retaining many of the features common to the former, such as arched ceilings of stone on the ground floor, with small openings for windows. The chimneys are of the square kind, set anglewise, of which there are only about half a dozen in Scotland. On the pediments of the dormer windows occur the initials of Sir John Hamilton, who appears to have occupied the post of master stabler to King James VI. Grange remained in the family of Hamilton till the end of the last century, when it was purchased from them by the Cadells, who have in no small degree contributed in developing the industries of Scotland, and whose descendants still retain the property.

ROCHESTER T-SQUARE CLUB.

A number of architectural draftsmen met in J. G. Cutler's office, at Rochester, New York, April 4, and formed a "T-Square Club." S. E. Hillger was elected president, and William H. Barnes secretary.

CHICAGO ARCHITECTURAL SKETCH CLUB.

The club gave an informal reception to the members and their lady friends at the club rooms, May 4. The feature of the evening was a varied programme, which was thoroughly enjoyable, and as the first reception given by the club, was a great success, and creditable to the members of the executive committee, to whose credit its arrangement was due.

The special order of business of the regular meeting, May 7, was the reading of a paper upon "Practical Plumbing," by Mr. Martin Moylan, of the Chicago Master Plumbers' Association; but, at the request of Mr. Moylan, the reading of the paper was postponed to the next regular meeting, May 21.

Notes From Foreign Exchanges.

ACCORDING to *La Semaine des Constructeurs*, M. Jules Simon, president of the historical department of the international exposition, to be opened in Paris, next year, has outlined a novel and comprehensive style of historical exhibition, which promises to make it a particularly instructive and attractive feature. He proposes to give a sort of object lesson record of the origin, successive developments and present condition of leading products of industry. Take a book, for example. By the side of a modern specimen of the author's, artist's, printer's and binder's skill will be shown the implements employed in its production, in historic series from the rude hand press of Gutenberg to the most improved power presses of our day. Transportation will be illustrated by a historic series of vehicles and motors for the land, the water and the air. In similar manner will be presented the subjects of painting, engraving, sculpture, the military arts, etc. If it be practicable to carry out such a scheme with even approximate completeness, the result must be exceedingly interesting.

IN an interesting communication to *La Revue du Genie Militaire*, a Captain Dolot appears to show that the presence of gypsum (sulphate of

lime), in building stones is prejudicial to the tenacity of lime mortars. In 1885 a number of crevices which appeared in the face of the stone wall of the enceinte, of Paris, attracted attention. Examination showed the masonry to be entirely dislocated in several portions of a wall thirteen feet thick. This wall consists of a stone facing with a backing of rubble in which a considerable proportion of gypsous stones have been used. The lime mortar, usually hard and white, has a red discoloration in some parts, and is there pulverulent and without tenacity. It was found that the mortar between two calcareous stones was always white and hard, but between a calcareous and a gypsous stone it had lost its cohesion, especially where in contact with the gypsum, while between two gypsous stones it was always pulverulent. Evidently the gypsum must either have hindered the setting of the mortar or led to its decomposition afterward. Chemical analysis showed sulphuric acid in the mortar in direct ratio with its decomposition and discoloration. It is well known that sulphate of lime is slightly soluble, and one theory is that external moisture from rains, penetrating the wall, becomes charged with this salt, and has an action on lime mortar similar to that of sea water, which is charged with a similar salt, the sulphate of magnesia. There may also be a mechanical dislocation of the hardened particles of lime mortar from the alternate crystallization, redissolving and recrystallization of sulphate of lime in the moisture which alternately penetrates the wall and evaporates in wet and dry seasons. The discoloration is ascribed to a hydrated peroxide of iron, formed through the action of the sulphuric acid in the gypsum.

Trade Catalogues.

E. C. STEARNS & CO., Syracuse, New York, are distributing from the press their illustrated and descriptive catalogue for 1888, covering the entire line of hardware specialties manufactured by the firm. Architects and builders can peruse it with profit.

THE A. A. GRIFFING IRON COMPANY, Jersey City, New Jersey, sole manufacturers of the Bundy steam and hot water radiator, has published an illustrated catalogue and price list for 1888, giving a full and complete exposition of the merits and working of this house-heater.

A. H. ABBOTT & CO., 50 Madison street, Chicago, have laid on our table, Keuffel & Esser's, of New York, a catalogue and price list of mathematical and surveying instruments, drawing materials and railroad engineers' supplies. Its 300 pages show hundreds of illustrations of instruments, among which are over 300 new designs. The catalogue is copyrighted.

L. S. GRAVES & SON, Rochester, New York, manufacturers of hydraulic passenger and freight elevators, have prepared and published a sixty-five-page pamphlet, presenting the merits of their elevators clearly and concisely, and giving the names of several hundred parties in different parts of the country who are using them.

THEODORE ALTENDER, 355 North Tenth street, Philadelphia, whose house was established thirty-five years ago, has his illustrated catalogue and price list for the ensuing season ready for distribution. It includes a full line of drawing instruments of the most approved patterns, and made in the best possible manner of selected material.

LUHRING & DIETZGEN, 115 Dearborn street, Chicago, have revised and published their catalogue for the present year, which covers all goods required by civil engineers and draftsmen, and forms a regular compendium of this class of goods. The firm are extensive manufacturers and importers of their specialties, and users would do well to procure a copy. Price, 50 cents.

NIMICK & BRITTAN, Pittsburgh, Pennsylvania, have published an expensively gotten up catalogue and price list for the season of 1888, showing the full line of door locks, latches, knobs, escutcheons, bell-pulls, sash-locks, etc., manufactured by them. The catalogue contains a large amount of information interesting to architects and builders, and would prove a convenient reference book.

J. B. JOHNSTON, 119 Lake street, Chicago, has just issued, in flexible muslin covers, a handsomely printed catalogue of builders' hardware, containing 124 pages of illustrations and reading matter, showing designs of over two hundred specialties in iron and bronze work, all easily referred to by an alphabetically arranged index following the title page. It is especially designed for architects and builders. Prices and all needful information is given.

CHARLES L. LEVY has just issued a revised and second edition of his "Electric Light Primer," being a simple and comprehensive digest of all the most important facts connected with dynamo and electric lights. In the treatment of the subject technicalities have been avoided, and anyone who can read can get a complete understanding of all that is necessary for the successful working and management of a plant. Price, 50 cents.

THE CUTLER MANUFACTURING COMPANY, of Rochester, New York, have prepared and published a pamphlet illustrative and descriptive of the "United States Mail Chute," designed for use in office buildings, whereby mail matter from the several stories of a building is deposited in a common receptacle or postoffice box situated on the main or ground floor. Comment on its utility is unnecessary. It can be seen in operation in almost every first-class office building.

BIRGE & SONS, Buffalo, New York, have originated a unique and artistic method of presenting the claims of their specialties in paper hangings, namely: in the publication of a portfolio-pamphlet, comprising six interior views, showing the application of a few of their new patterns and colorings in Berge Velours, Lacquers, Ingrains and Reliefs—the names given to said specialties. The six illustrative plates are typogravures, in imitation of water-color painting, and present, respectively; a vestibule, staircase, drawing room, morning room, dining room and bed chamber. Nothing could be more artistic in the way of harmony of coloring and adaptation of designs to the several interiors than that shown by these plates; and space alone prevents an intelligent synopsis of the treatment of them. Happily, the press matter accompanying the plates does this effectually and leaves no question as to the artistic taste that originated the designs. The aim of this house is to prepare this class of wall decorations in sets with regard to their harmonious combination—dado, wall space, frieze borders and ceilings. Architects and house decorators will find this portfolio-pamphlet an interesting study, and as such it is commended to them.

FULLER & WARREN CO., of Troy, Chicago, Cleveland and New York, have printed for circulation a handsome little pamphlet with illuminated cover descriptive of their well-known warm-air furnace. Sixteen prominent Chicago dwellings using this furnace are given as pictorial illustrations, among them, the residences of Prof. Swing, Messrs. Geo. Hale, Orson Smith, Robert Law and W. W. Kimball, of piano fame. The names of a large number of prominent patrons and many testimonials form a feature of the pamphlet.

Our Illustrations.

Library at Quincy, Ill.; Patton & Fisher, architects, Chicago.

Houses for William Waller, Chicago; J. L. Silsbee, architect.

Observatory for the Northwestern University, Evanston, Ill.; Cobb & Frost, architects, Chicago.

Railway passenger house for C. M. & N. R. R., Rockford, Ill.; Henry Schlacks, designer and delineator.

Business block for John T. Dale and S. E. Hart, Nos. 298, 300, 302, 304, 306 Dearborn street, Chicago; Thomas Hawkes, architect.

Store building, for C. J. Hamlin, Esq., Buffalo, N. Y.; W. W. Carlin, architect. The building, which will be occupied by Barnes, Hengerer & Co., is six stories high, built of pressed brick, with brownstone trimmings. To be finished August 1.

PHOTOGRAVURE PLATES.

(*Issued only to subscribers for the Photogravure edition.*)

Residences, Washington, D. C.

Store alterations, 1022 Walnut street, Philadelphia, Pa.; Wilson Eyre, Jr., architect.

Residence for Nathaniel S. Jones, Lake Shore drive, Chicago; S. S. Beman, architect.

University Club House, 1316 Walnut street, Philadelphia, Pa.; Wilson Eyre, Jr., architect.

Residence for Rodman Wistars, 1014 Spruce street, Philadelphia, Pa.; Wilson Eyre, Jr., architect.

Entrance to residence of Franklin MacVeagh, Chicago; H. H. Richardson, architect. Principal floor plan in margin. For general exterior view see Vol. X, No. 6.

Mosaics.

ARCHITECT H. M. HANSEN can now be found at 88 La Salle street, Chicago.

ARCHITECT W. G. BARFIELD has removed to the United States Express building, Chicago.

MCCULLY & MILES, of Chicago, artists in stained glass, have removed to 14 Monroe street.

THE Wight Fireproofing Company, Chicago, has removed its offices to 266 Dearborn street.

ARCHITECT P. W. RUEHL has removed from Twelfth and Halsted streets to 663 South Ashland avenue, Chicago.

THE Hallowell & Bodwell Granite Company's Chicago office has removed to the Insurance Exchange building, 218 La Salle street.

THE Chicago office of the Yale & Towne Lock Company has removed to 152-154 Wabash avenue, and has been elaborately fitted up for a full display of the hardware specialties of this famous concern. A visit of inspection is well worth the time involved, and is recommended to architects.

THE TIFFANY GLASS COMPANY have just completed a colored glass window for the residence of Mr. Potter Palmer, of Chicago. The subject is "The Knights of the Field of Cloth of Gold." The window measures 14 feet long by 7 feet wide, and contains something over six thousand pieces of glass. The realistic effect of the sky and the varying reflections on the metal armors are most unusual and successful. As a study of the extended possibilities of the colors and qualities obtainable in glass, this window is most interesting. The sky, the shining steel and gold armor, the delicate silk banners, the horses and their trappings, though all actually made of simple colored glass of rich and harmonious tones, appear to possess, singly, as great a difference and true a quality as nature itself. The window has been on exhibition in New York, and is about being sent to Chicago. It is to be placed on the stair landing in the Palmer mansion.

THE attention of architects and builders is called to the great and increasing popularity of the "Climax Rail" for sliding doors, of which over seven thousand feet are now in use and giving perfect satisfaction. Those who are not acquainted with its merits should send to George F. Taylor, No. 134 Water street, New York, for a model and price list, or a model may be seen at the office of THE INLAND ARCHITECT. Notably among the fine and costly residences in which the "Climax Rail" is in use may be mentioned: Mr. Vanderbilt's residence at Newport, R. I.; Joseph H. Knapp, president Mutual Life Insurance Company's residence on Bedford avenue, Brooklyn; Millard F. Smith's new and elegant residence on Bedford avenue, Brooklyn, and many others equally noted; also in Pottier & Stymas' grand warerooms, Fifth avenue and Forty-second street, New York. So confident are the manufacturers of its perfect working that if laid according to the printed directions they guarantee it for five years, and

they specially request that those who may from any cause find it not working satisfactorily to communicate with them. It may be mentioned for the benefit of those who have a choice, that any kind of sheave suited to the rail will be furnished on order.

N. G. TAYLOR & CO., manufacturers and dealers in tin plates, terne and metals, have put a new face on their advertisement in this issue. It may be remembered, this firm received the contract to replace the old copper roof of Independence Hall with a roof of their "old style" brand of tin plate, for which they lay stress on the merit of its extra heavy coating of tin.

THE United States Circuit Court for the district of New York, Judge Wheeler, has given a decision in favor of the Babcock & Wilcox Company against the Pioneer Iron Works, for infringement of their patent in building the "Zell" boilers, and we understand that the latter company have paid $6,500 in settlement for such infringement. A similar suit against the makers of the Moore boiler is now pending in the United States Circuit Court for the district of New Jersey.

A PROMINENT house in the department of ornamental glass is that of Mr. Chas. H. Stephens, on the northwest corner of Clinton and Jackson streets, Chicago, which represents the Streator Cathedral Glass Company, manufacturers of rolled plate, cathedral and opalescent glass; also imported art, antique, Venetian and prismatic window glass, cut and plain jewels, rondels, etc.; in short, all manner of ornamental and pressed glass specialties. They will be glad to correspond with architects.

WORK is well advanced upon the main building for the Buffalo International Fair and Exposition, which is to be held on September 4 to 14, 1888, at Buffalo, New York. To give exhibitors ample time to arrange their displays, all of the exposition buildings will be completed by August 1. The exposition grounds are in the geographical center of the city, and contain nearly one hundred acres. Manufacturers and others desiring space in the exposition should correspond at once with Mr. C. W. Robinson, secretary International Exposition, Buffalo, New York.

A SASH pulley recently noticed in the architect's offices is called the Norris No. 00406. It has a half inch tempered pin, turned perfectly noiseless wheel and a cover over the wheel that makes it impossible for the rope or chain to leave the wheel. In our opinion the pulley has no equal, and we think the architects of the country generally agree with us. We see by the advertisement of C. S. Norris & Co., page XIX, that they manufacture a greater variety of pulleys than any other house in the country. They are one of the oldest hardware houses in the United States. They make over 1,600 different qualities.

AN invention named after its inventor and known as McClellan "anti-syphon trap vent," wherein mercury has been utilized as a "seal" is attracting attention. In this device the air enters through an open thimble, extending upward, and the opening is closed by an inverted cup whose edges dip down into an annular groove containing the mercury. When there is a partial vacuum in the pipe this cup, which is very light, is lifted out of the mercury by the inflowing air, and drops back again the instant the demand for air ceases. There are many claims of advantage for this method over traps in general use, such as dispensing with long lines of vent pipes, convenience of inspection, drawing the air in on the sewer side of the trap and from the air of the room, instead of from cold air of the outside of a building, etc., for which the interested must refer to the manufacturers.

Building Outlook.

OFFICE OF THE INLAND ARCHITECT,
CHICAGO, May 5, 1888.

Business men generally stated at the beginning of the year, that less business would be done this year and at smaller margins than last year, and for four months business management has been conducted with this thought uppermost. A moderate restriction of activity has been maintained in nearly all manufacturing, building and trade channels. Future requirements have been provided for with caution. The declining tendency in prices which set in early in the winter has continued ever since in a few channels. In some, prices have been stationary, as for instance, in lumber, brick, glass and building and railroad equipment, generally. In iron, in textile goods, in hardware, of staple varieties, the tendency is downward, and the considerable curtailment of production has not checked that tendency. The probabilities are that the limit has been reached, and that confidence will revive. Consumers generally have very little stocks, from the shop retailer to the railway manager. Warehouses are not overstocked, cereals are not in over abundant supply. Iron products of all kinds are pretty well cleared up. Distributers have nothing but what they can carefully handle. Lumber manufacturers are busy, manufacturing and shipping, and they find ready markets west and east for their full production. Sash, door and blind manufacturers have made common cause for good living prices west and east, and will quite probably maintain them. Shingle manufacturers hope to be able to do so, but the production south, east and north promises to be somewhat heavier this year than last, without a corresponding expansion in demand. The expanding western demand for lumber promises to keep the trade in a healthy condition all year. The iron trade has suffered, and from present appearances last year's phenomenal activity in railway building will not be repeated this year. Reputable authorities guess at a falling off this year of 5,000 miles in railroad construction, namely, from 13,000 miles of main track to 8,000 miles, but this is only a guess. The last half of the year will probably develop a good deal of latent railway building enterprise. Even if there should be such a drop, other sources of demand will spring up of a compensating nature.

Building material generally is selling at about last year's prices. Brick contracts so far as they indicate probabilities, point to a busy building season in nearly every large city. Advices from a number of large towns warrant the same conclusion. In country localities and small towns there will be greater building activity than last year. Manufacturers are everywhere casting about for the cheapest and best location with regard to fuel transportation and labor. Natural gas centers are attracting many. Cheap coal developments are inducing many old and new concerns to locate where coal is cheaper. Water power attractions are not lost sight of. Extravagant municipal taxation, overbearing labor domination in some places, and other causes are working to make it an object for many to seek new and cheaper locations. This movement is drawing in its train a great deal of enterprise, in which the building trades will largely participate, and which architects and builders are perhaps more cognizant than others.

The building trades have had a fair, though, as yet, not a crowding season. The coöperation of employers in a strong organization, accompanied with the offer of friendly coöperation with labor for the adjustment of differences and the maintenance of friendly relations, has done much to secure uninterrupted work. The new labor policy of education and the development of more friendly relations between employers and employed, will not be without its beneficent features and results. Throughout the New England and the Middle States there is very little idleness, but just enough to make discretion, so far as strikes are concerned, the better part of valor. A great deal of engineering work is projected west and east, in the way of railway terminal facilities, rapid transit schemes, pipe lines, and so on. Bridge work will be abundant. House building, especially of smaller houses, will not fall below last year, taking the entire country into account. Builders in several of the larger western and northwestern cities have engaged themselves to do a large amount of such work. New York City is falling behind the record. Philadelphia expects to make as good showing as last year. Pittsburgh is quieter than a year ago. Cleveland building activity is not quite so pronounced. At Cincinnati there are prospects for considerable new work. It is in the interior towns of the Ohio and Mississippi Valley regions that the most healthful evidences of building activity are found. Taking the situation all through there is cause for congratulation that the trade manufacturing and industrial conditions are as fair as they are.

Synopsis of Building News.

Buffalo, N. Y.—Architects M. E. Beebe & Son: For A. F. Coatsworth, two-story store building; cost $8,000. For George Jones' Sons, four-story factory building, 50 by 150 feet; cost $10,000. For G. T. Williams, four-story building, 42 by 130 feet. For J. M. Richmond, four-story building, 80 by 120 feet.

Architect W. W. Carlin: For C. J. Hamlin, six-story store building, 80 by 140 feet.

Architect F. W. Humble: For St. Stephen's parish, stone church building, 65 by 165 feet; cost $50,000. For Frank Monen, six-story store and flat building, 26 by 60 feet; cost $6,000.

Chicago, Ill.—Architects Edbrooke & Burnham: For A. A. Paddon, two-story frame residence; cost $6,500. For John Hall, three-story flats, 23 by 82 feet; cost $10,000.

Architects Burnham & Root: For Burley & Co., store front, etc.; cost $60,000. For J. R. True, flats; cost $20,000. For M. Meyer, residence, to cost $50,000. For J. J. Hoch, residence, to cost $15,000.

Architects Jandy & Cady: For J. J. Palmer, two two-story dwellings, 38 by 56 feet; cost $6,500.

Architects Thiel & Lang: For F. Voltz, three-story store and flats, 33 by 68 feet; cost $7,000. For A. Malewski, three-story flat building, 24 by 64 feet; cost $9,000. For S. T. Petrowski, four-story flat building, 25 by 74 feet; cost $12,000. For John Uthes, two-story flat building, 21 by 53 feet; cost $7,500.

Architects E. Baumann: For Wm. Waller, four-story flat building, 40 by 75 feet; cost $20,000. Christian Zuber, three-story store and flats, 23 by 67 feet; cost $7,000.

Architect Louis Martins: For Mrs. Tegmeyer, two-story flat building, 35 by 47 feet; cost $10,000. For J. E. Woodruff, nine stores and flats, 192 by 86 feet; cost $65,000.

Cincinnati, Ohio.—Reported by Mr. Lawrence Mendenhall. The business situation here is hard to describe, inasmuch as there is a great variance of opinions, some being favorable for a moderately busy season, others contrarywise. The painters' strike has not proved as formidable as expected, and almost "*died a bornin.*" Some of the bosses have acceded to their employés' demand, while others refused to listen. Edward Atkinson's statistical works on strikes, their causes, losses, etc., deserve the widest promulgation and study, alike by contractors and their hands. Hard, cold, yet true and incontrovertible facts are presented in clear, forcible language. The rules on bidding as formulated and adopted by the National Association of Builders came up for discussion at a meeting of our Builders' Exchange, and the rules referred to a committee from that body, and architects to examine and report back their views to the excharge. The excavating for our city hall is going steadily along, and the work of laying the foundations will begin as soon as possible. Work on the armory is also progressing. The younger members of the craft have formed what promises not only to be a healthy organization, but also a most beneficial one, namely: "The Architectural League of Cincinnati," of which A. O. Elzner, is president and John Zettel, secretary. It is a genuine pleasure to wish them unbounded success with the injunction to build wisely and well.

Architect Emil F. Bande reports: Building new addition and remodeling old buildings of H. F. Busch, to cost $10,000; made plans for a three-story pressed brick front store and dwelling for Geo. Loew, to cost $6,000; made plans for brick store and dwelling for Geo. Schroer, to cost $4,000. He is also the architect of the First German Reformed Church, now in course of erection on Freeman avenue, between Findlay and York streets. The vestibule will be 36 feet high, stained glass windows, furnace heat, end wood floors and slate roof; also, plans for a two-and-one-half story dwelling house to be erected on Russell avenue, Eden Park, for Joseph Basch. It will be built of frame and shingling, have pine finish inside, inside blinds, iron and wood mantels, galvanized iron cornice and tin roof. The building will cost $3,200.

Architect Gustave W. Drach is engaged on plans for a double two-story and attic dwelling house, to be erected in Clifton, Ohio, for L. A. Stroble, of Elm and Canal streets, this city. It will be built of brick with stone trimmings and plaster work, have yellow pine finish inside, slate and wood mantels, inside and outside blinds, bathrooms, water-closets, laundries, hot and cold water attachments, slate roof and all modern improvements. It will cost about $7,000; also plans for a two-and-one-half-story dwelling and schoolhouse combined, to be erected in Avondale, for Miss Sarah Armstrong. The house will be built of frame and shingling, have yellow pine finish inside, inside blinds, bathrooms, water-closets, laundries, furnaces, galvanized iron cornice and tin roof. It will cost about $6,500; also, store and flat building, for John Manns, Esq., on Price Hill. The upper floor to be used for I. O. O. F. Hall. The building is to be of brick, and three stories high.

Architect Theo. A. Richter has prepared plans for a two-and-one-half-story dwelling house, to be erected on Price Hill, for W. B. Morrow. It will be built of brick with stone trimmings, have inside finish of hard and soft wood, iron and slate and wood mantels, inside and outside blinds, bathrooms, water-closets, laundries hot and cold water attachments, slate roof, pinnacle spire, iron railings and modern conveniences. The building will cost between $5,000 and $6,000.

Architects Sam'l Hannaford & Sons have their time well employed, and are engaged upon the following plans: Residence for D. L. Baumgarder, to be built of brick and stone and contain twelve rooms, slate roof and hardwood finish. Residence for Mrs. Mary A. Wolfe, of brick and stone, twelve rooms, tin roof and pine finish. W. P. Anderson, Esq., city, will build at Watch Hill, R. I., a summer cottage of ten rooms. Lewis Van Antwerp, Avondale, will build a residence of half timber and brick, to contain twelve rooms, slate roof and hardwood finish.

Architects Crapsey & Brown have their hands full on foreign work. In Winchester, Ky., they have drawn plans for a medium-sized hotel, with elevator and modern improvements, contains about one hundred rooms and will be built of brick.

Architect S. E. Des Jardins has the following plans under way: A store building for John Breen, at Loogootee, Indiana, to be of brick; size 35 by 55 feet; cost, $5,000. A residence for J. E. Smith, same place, to be of frame, eight rooms, shingle roof; cost, $3,000. Depot at Norwood, Ohio, frame, 16 by 50 feet, slate roof and sheathed inside with yellow pine.

Architect Jas. W. McLaughlin has drawn plans (the contracts are signed), for a mansion for Jos. Bohm, Esq., of brick with cutstone trimmings, slate and wood mantels; cost, $16,000.

Cleveland, Ohio.—Architect Edward Schwabe has prepared plans for Mrs. G. Haltnorth, four-story brick block, 45 by 65 feet; cost, $12,000. For H. P. McIntosh, four-story frame building, 50 by 115 feet; cost, $18,000. For O. E. Gehring, two-and-one-half-story dwelling, 40 by 60 feet; cost, $8,000. For Moses Koch, two-and-one-half-story dwelling and barn; cost, $15,000.

Columbia City, Ind.—Architects Wing & Mahurin, of Fort Wayne, are preparing plans for a two-story brick school building, 140 by 100 feet, slate roof; cost, $20,000.

Detroit, Mich.—There is a slight dropping off just at present in new work, though actual building operations are lively and the outlook seems good.

Architect Gordon W. Lloyd: For S. D. Miller and the Detroit City Railway Co., five-story brick and stone stores and offices, 74 by 100 feet; cost $30,000; M. Blay, mason; Clark, Vinton & Co., carpenters. For Trangott Schmidt, two-story brick and stone dwelling, 32 by 80 feet, slate roof; cost $10,000; A. Albrecht & Son, builders.

Architect A. C. Varney: For F. Simmons, three-story brick and stone double dwelling, 44 by 60 feet, gravel, tin and slate roof; cost $9,000; W. H. Hollands & Son, builders. For Mrs. W. H. Boden, two-story brick and stone double dwelling, 31 by 62 feet; cost $4,500. For Mrs. J. D. Baer, two-story brick and stone double dwelling, 36 by 68 feet, slate roof; cost $6,000; W. H. Hollands & Son, builders. For H. Strassburg, three-story brick and stone double dwelling, 31 by 73 feet, slate and gravel roof; cost $7,500; John Finn, builder. For H. Zitell, two-story brick and stone double dwelling, 30 by 58 feet, slate roof; cost $4,500; W. H. Carpenter, builder. For Charles Baxter, two-story brick and stone double dwelling, 25 by 62 feet, gravel and slate roof; cost $4,500. For G. W. Loomer, two-story brick and stone double dwelling, 27 by 62 feet, gravel and slate roof; cost $4,500. For Mrs. Jaquitte, two-story brick and stone double dwelling, 38 by 60 feet, tin and slate roof; cost $7,500. For J. A. Jones, two-story brick and stone barn, 46 by 100 feet; cost $6,000; Martin School, builder. For Allen Bros., block of six three-story brick and stone dwellings, 80 by 62 feet, slate, tin and gravel roof; cost $20,000. For W. H. Boden, block of three two-story brick and stone stores, 60 by 60 feet; cost $5,000. For B. Johnson, two-story brick and stone dwelling, 24 by 43 feet; cost $2,500.

Architects Scott & Co.: For Michigan Radiator Company, two-story brick shops, 214 by 350 feet; cost $30,000; Henry Carew, builder.

Architects Mason & Rice: For Detroit Gas Company, two-story brick works, 41 by 81 feet; cost $3,500; Henry Carew, builder.

Architects Spier & Rohns: For G. Stenton, two-story brick and stone double dwelling, 42 by 63 feet; cost $7,000; Wm. Reich, builder. For First German Baptist Society, two-story brick and stone church, 77 by 81 feet; cost $13,000; Wm. Reich, builder.

H. W. Holcomb is building a two-story brick and stone dwelling, 25 by 44 feet, slate roof; cost $4,000.

Architect Geo. W. Myers: For H. M. Kittle, two brick and stone dwellings, 20 by 42 feet, slate roof; cost $4,400; Mr. Helms, builder.

Architect Hugo Blogvelle: For Herman Merker, two two-story brick stores, 40 by 50 feet; cost $3,500; Jno. Schrage, mason; Mr. Dewey, carpenter.

Candler Bros. are building three two-story frame dwellings, 35 by 39 feet; cost $4,500.

Architects Hess & Raseman: For United Presbyterian Society, two-story brick and stone church, 96 by 120 feet, slate roof; cost $20,000; M. Blay, contractor. For J. T. Shaw, two-story brick and stone store building, 40 by 60 feet; cost $6,000; Jno. Schrage, mason; Hanens & Lange, carpenters.

Architect W. G. Malcomson: For A. B. Sears, two-story brick and stone dwelling, 30 by 57 feet; cost $4,800; F. Julien & Co., builders. For John Pettie, two-story brick and stone dwelling, 20 by 38 feet; cost $2,000; J. E. Boomer, builder.

Architect A. E. French, for Hudson & Baisde, three-story brick and stone double store building, 36 by 60 feet; cost $6,500.

Architects Donaldson & Meier: For David Ward, two-story brick dwelling, 36 by 62 feet, slate roof; cost $12,000; Topping & Fischer, builders. For Wood Alcohol Co., two-story brick, frame, and iron factory building, 24 by 30 feet; cost $3,400; Thos. Sherk & Co., builders.

Architect E. W. Arnold: For C. C. Blodgett, block of twelve three-story brick and stone dwellings, 107 by 188 feet; cost $60,000.

S. A. Buchanan is building a two-story frame dwelling, 40 by 57 feet; cost $7,000.

R. Helson is building a block of three two-story brick and stone dwellings, 36 by 68 feet; cost $9,000.

H. W. Raper & Co. are building a block of three frame dwellings, 24 by 40 feet each; cost $8,000.

Permits were issued during the month of April for 339 new buildings to cost $537,145. Alterations, etc., 71; cost $42,720; total $579,865.

El Paso, Tex.—Architects Stewart & Carpenter: For Wells, Fargo & Co., three-story stone, brick, and terra-cotta bank building; cost $25,000; under way. For J. Scheffelin, block of brick and stone residences; cost $30,000; alterations and third story addition to "Bank Block"; cost $9,000.

Ft. Wayne, Ind.—Architects Wing & Mahurin have prepared plans for a two-story brick and stone store building, 40 by 60 feet; cost $5,000, to be built in Van Wert, Ohio; also a frame cottage to be built in Jackson, Mich., to cost $2,000.

Haughville, Ind.—Architect Chas. G. Mueller of Indianapolis, has prepared plans for a three-story frame hotel, to be erected here.

Highland, Wis.—Architect A. Druiding, of Chicago, Ill., has prepared plans for a stone church for St. Joseph's Parish, 50 by 108 feet; cost $18,000.

Huntington, Ind.—Architects Wing & Mahurin, of Fort Wayne, have prepared plans for a two-story brick school building, 86 by 58 feet, slate roof; cost $10,000.

Kansas City, Mo.—Architect A. H. Ramsden has plans for a fine residence, to be built of Scotch granite and Massachusetts stone. Also for an office building, to cost $40,000, and an apartment building, to cost $150,000.

Architect C. B. Lakin has plans for A. G. Berlinder, for a private hotel building, to cost $30,000.

Architects Knox & Guinotte have prepared plans for the Commercial Bank building, three-stories high; cost $15,000.

Architects Vrydagh & Shepard have prepared plans for an apartment building with one hundred and fifty rooms, to cost $225,000.

Architects W. W. Polk & Son are preparing plans for an office building, to cost $500,000.

Architect B. H. Brooks has prepared plans for W. J. Anderson, for a double residence, to cost $18,000.

Architect E. F. Fassett has prepared plans for Col. A. B. McGee, for a brick and stone residence, to cost $18,000.

Architect Herman Probst has prepared plans for a $60,000 block, to be built this season for Mr. Chadwick.

John Owens will build a five-story office building, to cost $75,000, on Wyandotte street, near the Board of Trade.

Architect M. J. Schoefer has plans for a block of thirteen houses for an eastern syndicate, to cost $100,000.

Among the building permits recently issued are the following, which call for an expenditure of $5,000, or over: A. L. Mason, five-story brick business building, 48 by 112 feet; cost $50,000. G. W. Toulmin, two-story brick business building, 75 by 40 feet; cost $50,000. A. W. Carroll, seven two-story frame residences, 24 by 48 feet each; cost $14,000. Spencer & Otto, four two-story frame residences, 21 by 43 feet each; cost $122,000. Charles Barnhart, three two-story frame dwellings, 18 by 38 feet each; cost $5,400. W. E. Robbins, four two-story frame dwellings, 21 by 42 feet each; cost $7,200. W. C. McKay, two brick residences; cost $15,000. W. Diehl, four frame residences; cost $10,800. G. A. Heflin, seven frame residences; cost $10,500. R. S. Rodgers, two brick residences; cost $6,000. R. B. Canine & Co., eleven frame dwellings; cost $33,000. J. J. Kelley, block of twelve brick dwellings, 16 by 34 feet each; cost $70,000. A. W. Dowden, four brick stores and tenements; cost $17,000. E. W. Culver, two-story brick residence, 38 by 58 feet; cost $12,000. W. H. Caffery, two brick residences; cost $8,000. Lewis George, four frame dwellings; cost $5,000. Julius Herold, three brick business buildings; cost $10,000. Coates & Webster, remodeling Coates House; cost $12,000. Vaught & Hudgens, two brick business buildings, cost $5,000. J. B. Atkinson, two brick residences; cost $10,000. Geo. D. Heuling, six brick buildings; cost $8,000.

Little Rock, Ark.—Architect Thomas Harding: For J. M. Moore, two-story brick and granite residence, 54 by 84 feet. Tiling, ornamental brick, hardwood finish; cost $12,000; contracts not let. For Dr. Southall, brick residence, 52 by 65 feet; cost $8,000; contract not let. For L. B. Leigh, two-story brick residence, 47 by 70 feet; cost $7,000; contracts not let. For W. Turner, two-story brick business block, 140 by 70 feet; cost $12,000; contracts not let.

Architect B. J. Bartlett: For Athletic Association, brick boat house, natatorium, gymnasium, etc, 60 by 150 feet; cost $10,000. F. J. H. Rickon and B. J. Bartlett associate architects for Mrs. A. Savage, two-story frame residence, 50 by 50 feet; cost $3,000. B. J. Bartlett, architect. For E. C. Homer, cottage; cost $3,000. At Helena: For Newman & Son, two-story frame residence; cost $7,000. For C. W. England, block of brick stores, 75 by 120 feet; cost $12,000. For Little Rock County Hospital, pavilion plan, frame building; cost $15,000.

Logansport, Ind.—Architect Chas. E. Mueller, of Indianapolis, has prepared plans for a four-story brick and stone opera house for Mr. Kranceberger.

Lonoke, Ark.—Architect B. J. Bartlett, of Little Rock. For Lonoke Hotel Company, two-story brick hotel, 43 by 64 feet; cost, $7,000.

Oil City, Pa.—Architect A. Druiding, of Chicago, Ill., has prepared plans for St. Joseph's Parish, for a brick and stone church, 64 by 150 feet, slate roof; cost $60,000.

Omaha, Neb.—Architects Fowler & Biendorf: For T. V. Bonner, business block, with all modern improvements. For James Kirner, double frame tenement house; cost $5,000.

Architect Sidney Smith is preparing plans for Madis Bros., for a large office building.

Owatonna, Minn.—Architect O. G. Traphagen, of Duluth, has prepared plans for a two-story brick school building, to be built soon.

Richmond, Ind.—Architects Wing & Mahurin, of Fort Wayne: For Fort Wayne Jenney Electric Light Works, three-story brick factory, 40 by 125 feet, slate roof; cost $6,000.

Riverside, Ala.—J. R. Coleman has prepared plans and is building for himself a three-story frame, 40 by 100 feet; cost $10,000.

Sedamsville, Ohio.—Architect A. Druiding, of Chicago, Ill., has prepared plans for St. Mary's Church, 50 by 135 feet; cost $21,000.

St. Louis, Mo.—Architect Thos. Walsh has prepared plans for a five-story brick and stone store building, 225 by 25 feet; cost $25,000.

Architect T. B. Annan: For Prof. J. M. North, frame residence, 45 by 48 feet; cost $4,000.

Architect E. C. Jaussen: For Herman Krutsch, brick and stone dwelling, 31 by 38 feet, slate roof; cost $5,000.

Architect Charles May: For F. H. Vick, two-story brick dwelling, 17 by 49 feet; cost $2,000.

Architect Aug. Beinke: For A. Mack, two-story stores and flats, 44 by 66 feet; cost $7,000.

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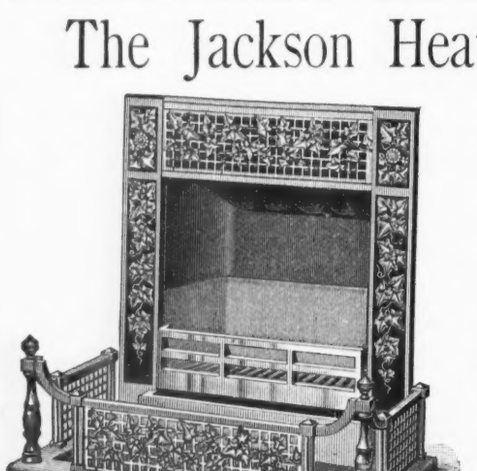

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